NEWCASTLE CITY FUTURES 2065

ANCHORING UNIVERSITIES IN URBAN REGIONS THROUGH CITY FORESIGHT

Mark Tewdwr-Jones, John Goddard and Paul Cowie

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This report is intended for:

Policy makers and a wide range of professionals and researchers whose interests relate to all aspects of the future of cities. The report focuses on Newcastle, but will also be relevant to the interests of many other cities and regions nationally and internationally.

This report should be cited as:

ACKNOWLEDGEMENTS

The Newcastle City Futures 2065 project was funded by the Foresight Programme of the Government Office for Science under the direction of the Chief Scientific Adviser to HM Government. Foresight strengthens strategic policy-making in government by embedding a futures approach. This was the first occasion that a Foresight project was commissioned at a geographical area beneath that of the country as a whole.

It has become increasingly recognised that achieving good qualities of life in the UK depends in large part on a good future for cities. Challenges can be identified for the here and now but it is clear that to meet these, investment is needed that will have impacts in the long run.

We are all conscious of the pace of technological change and so we not only need to seek to meet our future aspirations but to future-proof to the best of our current abilities. Most thinking about future cities is concerned with the relatively short run. In June 2013, the Government Chief Scientific Adviser, Sir Mark Walport, launched a Foresight Project on the Future of Cities which had a 50-year time horizon. As a part of that project, he felt that it was important to engage with cities and Newcastle was the first of a series of visits by Sir Mark and the Foresight team. The idea of thinking about the long term was enthusiastically received and the Newcastle City Futures Foresight programme was launched in 2014. This report is the culmination of much hard work by many people, led by the three authors of this report, supported by a broad-based local community. The Newcastle Project had a structure which initially mirrored the national one with a Lead Expert Group but this has since broadened into the Newcastle City Futures Development Group, embracing the universities, the City Council and a wide range of organisations and citizens. This report is interesting, thought-provoking and very impressive and will undoubtedly have a significant impact on the future of Newcastle and its region.

The task of looking 50 years ahead is seriously challenging. Our understanding of cities – the science – provides a foundation but there are too many uncertainties to provide forecasts. What can be done is to broaden the foundation to encompass aspirations for the future and then combine these with plausible trends to generate a number of scenarios. This process has been achieved brilliantly in this study. This report offers an excellent account of the baseline – where we are now and the challenges – and in highly innovative ways proceeds to identify what is important for the future as a basis for scenario development. The exhibition was an outstanding achievement which raised the awareness of the challenges to a wider community and was the basis for futures' thinking via stakeholder and Delphi groups. Three detailed scenarios have emerged from this process the first of which is essentially trend-based, the other two representing different kinds of aspirations based on alternative assumptions about the balance of economic development across the UK. What emerges is the beginnings of a route map to meet the challenges shown in the trends scenario to generate an exciting and prosperous future for the city and its region. These conclusions, and the engaging way in which they have been generated, represent a tremendous achievement.

Alan Wilson

Professor Sir Alan Wilson FBA FRS, Chair, Lead Expert Group,
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THE NEWCASTLE CITY FUTURES 2065 PROJECT

This Project has taken a broad and overarching look at the long-term future of cities over the next 50 years using Newcastle upon Tyne as a pilot. It demonstrates that there is a strong case to develop a much more strategic and synoptic approach using futures methods and city-wide participatory processes to think about city futures. Universities can work more proactively with and for the cities in which they are located, and use both creative techniques and their expertise to foster civic engagement.

This report shows that a reappraisal is vital to help address cities' major challenges ahead – for example, relating to demographic shifts, economic growth, social and environmental change, transport and infrastructure needs, and the integration of public health and urban environments. The challenge is to meet the rising expectations within and across cities that will come over time; and to deliver a wider range of sustainable benefits based on the unique place assets evident in cities. At a time when citizens in cities can often feel remote from policy-making, there is a particular need for more coherent and consistent approaches to generating engagement and participation processes across entire urban areas relating to change, by remembering the past, being confident about the present, and looking forward to the future.

The aims of the project

The Project aimed to use the best available scientific and other evidence and expert and public opinion:

1. To work with local partners and national bodies in establishing a review of key research applicable to the city region;

2. To establish a transferable methodology through which expertise in local universities could be mobilised on a sustainable basis and focused on the long term future of a city region up to 2065;

3. To develop long term thinking capacity in the partnership around key future challenges such as environmental sustainability, long term economic development, the healthy and ageing city, urban to urban relationships, and urban and rural dynamics.

A word of caution

It is not feasible for a project with such a broad scope to consider every issue in the same level of detail and complexity as a local authority or government department. Instead, the added value of the project has come from taking a particularly broad and strategic view across the many sectors, gathering evidence from experts and citizens, and developing stronger relationships between higher education and policy makers. As with national Foresight reports of the UK's Government Office for Science, it is expected that this report will generate interest and discussions across a range of organisations and individuals beyond universities and local authorities.

An independent look

This report provides an independent analysis of the challenges ahead and how they might evolve. As such, the report does not constitute policy, nor is it a vision statement. Rather, the report is intended to inform the strategic and long-term choices facing a city such as Newcastle, and creates a platform for discussion by governments, businesses, and society as a whole.

How the project adds value over previous work

The added value comes from a combination of three factors:

- The breadth of the analysis: the work looks across different themes and subject areas and identifies positive and negative relationships between them; takes account of spatial and geographical differences across a city; and reviews trends across the major sectors – including the built environment and infrastructure, economic development, science and technology, conservation and leisure.

- Crucially, the analysis takes an even-handed view – it does not judge one type of activity to be more or less important than another. It also contrasts the perspectives that characterise different communities and different expert disciplines – acknowledging the reality that these viewpoints often conflict.

- The analysis lifts horizons from a short-term focus on narrow impacts, to looking at the strategic needs of a city across the medium to long term.

The Project has attempted to be comprehensive. It has:

- Involved over 100 experts and stakeholders from diverse disciplines and organisations in the North East of England, covering public, private, community and voluntary sectors.

- Drawn upon over 100 pieces of evidence contained in official reports, academic papers, as well as a wide range of ongoing reviews and studies.

- Received the opinions of approximately 2500 members of the public at a specially-convened futures' facing city pop-up exhibition and events series, generating over 100 comment cards and ideas alongside feedback in 24 public forum events.

- Spanned the interests across the city region and across a diverse range of organisations beyond higher education and outside government.

- Primarily focused on Newcastle upon Tyne but the project has implications for other cities and universities working with their cities both within the UK and overseas.

Cities and engagement

The Newcastle City Futures 2065 project sought to develop new approaches and methodologies for universities to act as anchor institutions for cities by mobilising their expertise and community engagement around the future of their cities. Cities both in the UK and internationally are struggling to manage the diverse issues that affect their existence in a synoptic way that engage citizens and businesses transparently. The fragmented governance structure of large cities creates a vacuum for policy making and public accountability, making engagement with city residents difficult to achieve.

Local communities can play a greater role in urban governance and citizens of urban areas are increasingly diverse, and municipal government has to find new ways to engage and communicate with all sections of the electorate. Citizens possess pride of their cities' histories and it is important to celebrate urban pasts as well as creating the means to shape urban futures, by using innovative visual means to tell stories of change. Visualisation methods allow those place distinctive histories to be played out as a backdrop to the contemporary city and as a way to engage citizens on their terms.

The potential of the civic university

Universities are key knowledge institutions that can give something back to the cities in which they are located. Higher education can perform a civic role in generating new modes of political, business and social engagement at a time when universities are assessed for their impact as well as their teaching quality and research performance. Universities are already developing new models for societal and business engagement while maintaining excellence in critical research analysis and appraisal, and facilitating scientific developments alongside social innovation.

City futures and foresight

Newcastle City Futures 2065 devised new ways for universities and representatives of public, private, voluntary and community sectors to share ideas, to think creatively, and to establish research evidence applicable to the development of the Newcastle city region.

The project initiated an intensive and ambitious city wide engagement and collaborative effort that asked people and organisations for their opinions on Newcastle past, present and future. It sought to provide a synoptic perspective of trends long term by drawing on cross-disciplinary and cross-sector expertise.

The report is not a plan for Newcastle's future but rather is a platform for discussion about whether a future vision for the city is desirable.

Foresight methods employed within cities, when embedded in governance processes through collaborative effort, can engage a range of actors in shaping urban futures. The project established a transferable methodology that allows universities to mobilise other sectors in a sustainable way in the long-term interests of a city's future.

Meeting the synoptic and strategic needs of cities

As we enter a new governance and new economic landscape for our largest cities, there is a greater need for more reliable forms of intelligence, research evidence, and public engagement processes. The project revealed that the data needs of cities are not always being drawn together in a coordinated way, allowing the right flow of information to go to the right people in a timely manner. Universities can play a central role in facilitating data sharing flows.

The design of a strategic approach to address the long-term future for cities with universities playing a central choreographic role needs to be framed by political decisions – for example, on the balance between city-wide and local powers; the relative importance of the various future challenges; and the relative roles of regulation, incentives and markets. Wider issues of resource availability and the inherent capacity of cities would also be a major consideration, as would the appropriate balance between economic growth, social progress, infrastructure provision, and environmental protection.

Strategic spatial planning in our largest cities is weak at the present time and has been replaced largely by incremental project-by-project decision-making. This report does not advocate the return of strategic spatial plans per se, but it does recommend the pursuit of some of the hallmarks of strategic spatial planning processes. These include the development and use of intelligence and data, the adoption of backcasting and futures methods, the promotion of city-wide and local community engagement processes, and the use of social science to map, understand and analyse the inter-relationships between sectors and processes through systems work.

The task of developing this shift in approach at a time when strategic planning is unpopular politically should not be underestimated. It will require the support and leadership at the highest levels of devolved government to stand any chance of succeeding.

Next steps

More detailed work will be needed to understand the drivers of change affecting cities such as Newcastle upon Tyne, as well as ensuring that commitment across institutions and organisations remain to create a platform for long-term futures thinking. The academics of Newcastle City Futures 2065 project are willing to continue to facilitate engagement processes and assist in generating understanding within government, local authorities, other parts of the public sector, business and communities.

The following themes have been identified as potential future work:

- Visualisation of long-term scenarios specific to Newcastle that combine expertise in computing, mapping, spatial analysis, urban planning.
- Support for new digital platforms that allow the exchange of data across different sectors and organisations within the universities and cities, and the establishment of a common city-specific resource database for use by different actors.
- Identification of the assets of cities, that encompasses not only economic potential but also addresses social, environmental and resource assets and how these may change in the future.
- Demonstration projects within the city that seek to take a cross-sectoral approach to ameliorate problems or create new opportunities, for example:
  1) relationships between an ageing society, housing needs, and the use of digital technology;
  2) relationships between transport and highway design, digital technology and public health benefits;
  3) relationships between enhancing local democracy and engagement, visualisation of the urban realm, and cultural and creative arts to generate public interest.
  4) relationships between science and engineering and collaborative democracy, particularly around themes such as energy consumption, and health.
- There is also a need to capitalise on opportunities to bid for further funding for specific projects that have benefit to the city, and to promote the use of new methods that can be used by both universities and cities.

01

INTRODUCTION
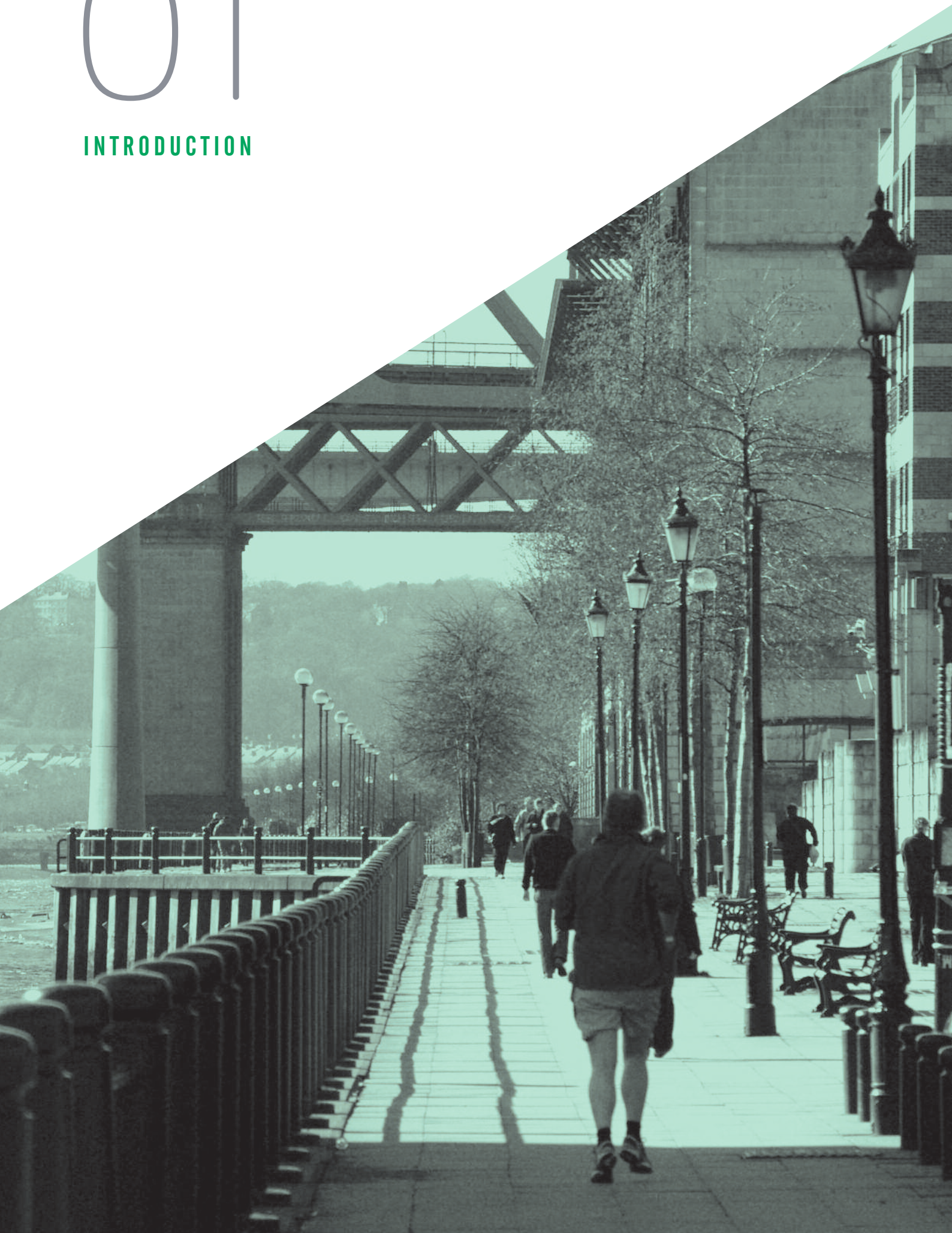
THE AIMS OF THE PROJECT

1.1 The Newcastle City Futures 2065 project was funded by the Government Office for Science and progressed by Newcastle University Institute of Social Renewal as a collaborative engagement project. This project aimed to pilot a foresight methodology which is capable of being applied within a city region by mobilising the intellectual resources of universities and their local stakeholders and could be adopted elsewhere.

1.2 The project had three goals:

1. To work with local partners and national bodies in establishing a review of key research applicable to the city region

2. To establish a transferable methodology through which expertise in local universities could be mobilised on a sustainable basis and focused on the long term future of a city region

3. To develop long term thinking capacity in the partnership around key future challenges such as environmental sustainability, long term economic development, the healthy and ageing city, urban to urban relationships, and urban and rural dynamics.

The project scope

1.3 Although the title of the project specifically identifies Newcastle, any study on the future of the city cannot ignore the wider urban region within which Newcastle is situated. Accordingly, the project team has taken the space and flows of the metropolitan area – equivalent to Newcastle, Gateshead and Tyneside – as the basis for analysing the city. In some sections of the report, specific reference is made to the city of Newcastle upon Tyne; in others it relates to this wider area and the relationship between the two.

Why the project was undertaken

1.4 What will cities look like in the future? How should research methods and policy intelligence improve to take account of possible future threats or by intelligence not flowing to the right sectors timely? At an uncertain time for cities, this project argues for long term city foresight as a method to bring together universities and the cities within which they are located. Using a case study of Newcastle, and arguing for a new approach to foster spatial intelligence, we discuss how the university can deploy reviews, visualisation, systems thinking and scenario development methods in a series of city-wide public engagement initiatives as informed storylines in the evolution of places.

The present situation

1.5 The total UK population is currently (mid 2013) estimated to be 63.7 million and any population increases would almost certainly create additional demand for resources and land. Latest ONS projections suggest that the total UK population could increase to 67.1 million by 2020, 72.7 million by 2035 and to 77 million by 2050 (ONS, 2012). 90 per cent of the UK's population reside on 10 per cent of the land area, i.e. in urban areas (GOS, 2010). A quarter of the UK's current population reside within the South East of England, so this region may be demonstrably affected by any growth but also will have to find ways to deliver essential services and new development against a backdrop of intense resistance to change.

1.6 Levels of economic growth and affluence affect consumption patterns such as creating changing demand for housing and leisure time. The UK has seen high levels of growth and prosperity but as the recent recession has demonstrated, global shocks can trigger rapid change and a long term legacy to deal with. In recent economic recession terms, there are also considerable differentials in unemployment between the north and the south of the UK and the reliance on public sector jobs over private sector employment. Between June 2010 and June 2011, the North East lost 8.2 per cent of its public sector jobs, whereas the South East saw an increase of 2.2 per cent; London has created 10 times as many private sector jobs since 2010 as any other UK city (Centre for Cities, 2014). The economically-active workforce is also set to fall to 61.7 per cent by 2020, a shrinking workforce will have implications for taxation revenue and in-turn investment into infrastructure and other public services (Deloitte MSC, 2008; Stern, 2006).

1.7 Meeting the needs of an increasingly mobile society is a challenge we all recognise. The number of cars on Britain's roads has increased from 2 million in 1950 to 31 million in 2010. Congestion costs the UK economy £17.5 billion annually (British Chambers of Commerce, 2007). The number of passengers using the rail system grew by 27 per cent between 2003 and 2009 and is expected to increase significantly in the next ten years (Eddington, 2006; Office of Rail Regulation, 2009), while the number of people using the UK's airports rose six fold between 1970 and 2002 to nearly 219 million in 2011, a figure forecast to grow to 315 million by 2030 and 445 million by 2050 (DfT, 2013). As densely crowded cities in the south struggle to cope with increases in the population, commuting between home and places of employment may become much more difficult without significant forms of investment and viable alternatives or else takes on the form of long distance commuting (Hall and Pain, 2007; cf. Tighe, 2014).

1.8 The ways individuals, businesses, civil society and policymakers adapt to climate change and find ways to live more sustainably will clearly have a significant impact on land use. The UK currently imports 95 per cent of fruit and 50 per cent of vegetables, and 0.78m tonnes of fresh fruit and vegetables are brought in from Africa each year (Cabinet Office, 2008). Changes to the climate globally will affect crop production and availability, the prices of foodstuffs and the ease with which they can be transported to urban markets. Flood risks from rising sea levels or, as we witnessed in winter 2013-14, extreme weather conditions may also affect low lying farming areas in the UK, especially bordering the East Coast and in towns and cities close to floodplains and will possibly impact on infrastructure (Chatterton et al. 2009; Environment Agency, 2008).

1.9 For energy, there are possible shortages of gas, oil and water in future decades, with concern about rising energy prices, a reliance on imports, and ongoing uncertainty about a fracking future (O'Hara et al. 2014). Already some parts of the South East of England lack sufficient water needs, and by 2020 our consumption of water will have increased to an extra 800 million litres per day with spatial implications for the need for reservoir and water piping and transfers to cities (Chilton et al. 2004; Enviros, 2005; DTI, 2006; DEFRA, 2008).

1.10 Changing lifestyle, demographic trends and climate conditions have imposed future pressure on resources around the UK and there may be an early advantage to the north rather than the south moving to a low carbon economy with associated economic potential (Gibbs, 2010). The ability of places to offer a conducive environment to investment could become a critical factor particular where quality of life and access to resources become critical issues for some city-regions more than others (Lewis, 2010). This is not only in relation to temperature, energy, food and water, but also to the 'residential offer', the link between place and housing – and house prices.

1.11 The urban and its hinterland are interdependent. City regions not only enable us to have homes, shops, hospitals, schools, universities, leisure facilities, transport, and places of work. The wider geographical area beyond the administrative boundaries of cities provides us with water, food, energy, recreation, biodiversity, minerals, and is a site for our waste. But the way we have conceptualised these issues has been constrained into distinctive separate policies and distinctive urban or rural problems. As our appetite for more essential services increases and quality of life improves, so does the problem of how to manage these trends and assess the relationships between urban and rural areas, their hinterlands, and their functional as opposed to administrative relationships.

1.12 Juggling all the different requirements in managing a city needs is one skill, but ensuring that future concerns can be addressed in an era of uncertainty is even more challenging. Ultimately, it will be the politicians who take the final decisions, one hopes based on vision and principles, rather than through what Charles Lindblom referred to as'muddling through' (Lindblom, 1959) and a series of incremental ad hoc responses. The UK's former Chief Scientist Sir John Beddington has talked of the possibility of a "perfect storm" occurring around 2030 with water, food and energy shortages as the global population rises and climate change takes hold (Beddington, 2009). What is clear is that the UK will require a major transformation in its response to changing circumstances, all of which will have spatial implications, varying city to city. With this in mind it is our contention that the cities of the North of England could become a testbed for long term city foresight thinking.

1.13 The recent IPPR report Northern Prosperity is National Prosperity (2012: 4) states, 'The North holds huge untapped potential… As many nations look to their mid-sized cities as the engines of future growth, so the potential of these key centres of employment and economic dynamics is yet to be fully exploited." Recent work by Parkinson et al. (2012) and Overman and Rice (2008) suggest that there is scope to reinvigorate northern economies, with a reconfiguration of policies towards human capital, innovation and business environment, transport infrastructure, and enhanced institutional capacity in northern cities. But little work has been undertaken to date on the potential of natural and environmental assets, of civic leadership and social cohesion, of demographic change, and the potential of changing behaviours in the context of change. This is especially so in the context of climate change, not only as it may affect the north demonstrably, but also how it may affect the south and a concomitant depletion of resources, resources that may remain present in the north. Lower rates of ageing will be experienced in the north (Boden and Rees, 2010), and there are distinctive places in the northern regions that may assist in changing living patterns (Coombes, 2010).

1.14 There may be significant assets that can be identified in northern city regions relating to environmental resources, quality of life and well-being that are currently underdeveloped or at least not considered in a broader long term economic growth perspective. Some localities of the north already host the beginnings of new economic assets, including: renewable energy in North Tyneside; advanced engineering and materials in South Yorkshire; clean technologies in Huddersfield and Sheffield; carbon capture and storage in Yorkshire, Humberside and Teesside; and low carbon capture in North East England. Institutionally, the northern cities have a sound track record in working on a broader city region and long term basis, with Manchester and Humberside preparing their own 'mini-Stern' reports on climate change (Deloitte, 2008). And there are already collaborative working arrangements between the N8 northern universities, and between the universities and city regions and Local Enterprise Partnerships. Indeed the focus in the new round of European regional Structural Funds on 'smart, sustainable and inclusive growth' highlights the opportunity for universities to play a key role in shaping and implementing smart specialisation strategies which recognise the distinctive assets of particular places. (European Commission, 2012; Goddard, Kempton & Vallance 2013; Kempton et.al. 2014).

1.15 To begin to understand these trends and assess the possible policy responses will require working across the social science and science research communities within each city region, to start to use northern cities as sites or laboratories through which current and under/unused assets can be identified. However, what counts as 'assets' depends on cutting-edge thinking about how current and unused resources might be deployed to foster the creation of thriving and sustainable cities with different infrastructural needs in the future and how to renew ageing infrastructure, dealing with recognised market failures such as congestion, and how a shifting demographic provides the challenging context within which such questions must be answered.

Gathering evidence

1.16 The project was launched in summer 2014. A Lead Expert Group (LEG) was established with representation from partner organisations and Northumbria University. In addition to this, an expert panel of stakeholders was established drawing on a broad spectrum of interests and sectors within the regional economy and society. These two bodies provide the oversight and knowledge base vital to the project. After January 2015, the LEG was merged into the Newcastle 'City Futures Development Group' (CFDG), a new committee comprising representatives of higher education, local authority, enterprise and business, and the voluntary sector to forge stronger relationships and to boost research-policy links. Membership of the LEG and CFDG is outlined in the appendices.

1.17 A detailed work programme was then developed which had a number of phases:

- First phase – To develop a baseline of evidence about the city region and the challenges and opportunities it faces. A stakeholder workshop was held to assist this phase of the project;

- Second Phase – To develop a more detailed understanding of the key themes and how expert stakeholders understood the relationship between the key themes.

- Third phase – To embed foresight thinking to the policy making process within Newcastle and to assist in the creation of new processes and networks to enable closer relationships between academic research and the policy community around long term issues.

- Fourth Phase – Iterative discussions with insights from the national Foresight Future of Cities programme and the development of a network of universities/cities interested in city futures.

1.18 Foresight has used a multidisciplinary, multi-perspective approach to develop an understanding of Newcastle as a city past, present and future, and has explored the effect of economic, social and environmental change in an integrated way. This has included:

- Consulting with a range of stakeholders in the North East of England – Over 100 academics, policy-makers, non-governmental organisations, agencies, businesses and individuals were consulted between May 2014 and May 2015. This work provided a rounded picture of the major challenges for the future of Newcastle.

- Receiving the opinions of approximately 2500 members of the public at a specially-convened futures' facing city pop-up exhibition and events series located in Newcastle city centre in May and June 2014, that also generated over 100 comment cards and ideas on a range of topics. Citizens also gave detailed comments and feedback at each of the 24 public forum events organised within the exhibition arena.

- Collecting the evidence base – In common with national Foresight projects, approximately 100 evidence-based academic and policy papers on a broad range of topics relating to Newcastle and the North East were collated from leading academics and library sources. These papers were not commissioned specially for the Newcastle City Futures 2065 project but do cover recent relevant thinking and trends. Some of this work also speculates on possible futures for the subject in question.

- Providing a historical perspective – The team considered the historical development of the city in its region to gain an understanding of change and trends in the city since the early 20th Century.

- Drawing on national and international evidence – An analysis of how other cities around the UK and the globe have tackled the future of cities. This work focused on issues and responses that are more relevant and/or transferable to Newcastle and informed the approach to the project.

1.19 The project progressed through these phases and employed a range of methodologies while the project team were at the forefront of establishing new research-policy relationships. The Foresight project became embedded within Newcastle University as an anchor around which a dialogue emerged and that focused on: the future long-term direction of Newcastle; the role of the university in its civic responsibility towards the city in which it is located; and the new ways the city and the university could precipitate more innovative forms of public engagement about the future. This caused progress on the project to be delayed as the foresight work and the innovative dialogue developed simultaneously. But it did lead to a stronger set of relationships to emerge between partner organisations even before the project finished.

1.20 This report sets out the findings of the project, illustrating the role universities can make to shaping the future of the cities in which they are key knowledge institutions. Since it addresses all relevant sectors and issues of interest to the future of the city, it is unable to cover some subject areas in depth but rather acts as an initial shop window. It outlines the results of the different methodologies employed to create a series of pictures and perspectives on the future of the city, and is as much about the processes employed as the findings. It places no onus on politicians or officials, business leaders, or community representatives to follow a particular plan; the report is not a vision of the future but rather provides a platform for discussion about whether certain futures for Newcastle are desirable.

The project's report structure

1.21 The report structure is as follows:

Chapter 2 – Explores cities in context.

Chapter 3 – Considers how the subject of cities has focused political and public policy attention over the last few years, particularly in relation to cities as engines of economic growth and in the context of changing governance.

Chapter 4 – Examines the changing role of universities especially with regards to the civic university agenda.

Chapter 5 – Outlines the principal range of methodologies adopted for the project.

Chapter 6 – Positions Newcastle geographically and sets out the baseline evidence by focusing on historical evolution of the city, examining major drivers of change and the implications of previous forms of intervention for today. This chapter provides a detailed discussion of the city by examining residential and commercial activity, economic development, transport and infrastructure, conservation, environment, demographic change and health issues, and the role of land use in water resource management and managing flood risk. The richness and complexity of the city is demonstrated by highlighting the variety of factors and demands that policy-makers need to balance in different sectors and at different spatial scales.

Chapters 7-11 – Set out the findings of the different engagement methods utilised to gather evidence from experts and members of the public. Chapter 7 presents the story of the public exhibition and events platform and the public identification of future issues; Chapter 8 examines some of the research and intelligence sources that exist; Chapter 9 sets out the findings of the stakeholder workshops that took place to identify key themes; Chapter 10 presents the findings of Delphi surveys; and Chapter 11 synthesises the evidence, analyses the options and constructs three different scenarios for the future of Newcastle based on the discussions presented in the previous five chapters.

Chapter 12 – discusses how universities as anchor institutions can support cities and facilitate city-wide public engagement on long term futures, and illustrates the changing governance and city-university processes that have been established in Newcastle since the inception of the Newcastle City Futures 2065 project. This has included developing public engagement and visualisation means, turning this into a policy platform, and then fostering cross-disciplinary and cross-agency research platforms.

Chapter 13 – draws some of the key findings together including challenges. In so doing, the chapter does not set out a plan of action or a series of recommendations – that is beyond the scope of this report, as it will need to be conditioned on political judgement, wider priorities and resource availability. Instead, it creates a guiding platform for others to decide what future courses of action are desirable.

02

2.1 Cities in the UK, and elsewhere around the globe, are currently struggling to cope with increasing demands, for better public services in an era of fiscal pressures, with fluctuations in population and changing demographics. Some have weak economies and business closures, and face ongoing uncertainty about global trade.

All cities have to confront the challenge of the rising cost and sustainability of energy supplies and the impact of climate change. At the same time it is widely recognised that cities can be the engines of future growth and there remains untapped potential to create innovative solutions and improved institutional arrangements to benefit citizens and businesses. But changing institutional frameworks have weakened the availability of evidence, data and strategic thinking, to enable appropriately evaluated and robust collection of intelligence and methods to guide cities through complexity both now and in the medium to long term.

2.2 Agencies and institutions responsible to supply public services such as transport and utilities, or health and education, may be separate to those responsible for formulating long term city visions, regulating land, and other commodities. A possibly fragmented and constantly changing governance structure during a time of economic upheaval is a common feature of cities and states that have witnessed the privatisation of public services, public finance cut backs, and a changing and changeable architecture of policy making. One consequence is that although different agencies do collect different sorts of data and intelligence about the same places, they often do not share that intelligence across the sectors or actors.

2.3 Across the UK political spectrum there is also a consensus that local communities need to play a greater role in urban government, both in the decisions made that affect people's everyday lives, and in the design and delivery of services provided by the state. With the enormous public uptake of digital technologies including broadband internet, mobile phones, laptop and tablet computers, and the associated 'big data' agenda, there are opportunities to create more representative and sustainable forms of local democracy and service provision both within and for cities, while acknowledging the threat to privacy.

03

FUTURE CITIES
ON THE POLITICAL
AGENDA

3.1 There are several initiatives recently or currently underway in policy circles to attempt to grapple with some of these issues and to assess the prospects for the future of cities. Among these have been: examination of land use future trends across the UK (GOS, 2010); a study on the relationship between demography and the environment (RCEP, 2011); a former Deputy Prime Minister's review of economic growth prospects (Heseltine Review, 2012); a review of northern cities' prospects and infrastructure (IPPR North/Northern Economic Futures Commission, 2012); a North East Independent Economic Review undertaken by a former Secretary of State (NELEP, 2013); the publication of the National Infrastructure Plan (HM Treasury, 2014); the report of a Cities Growth Commission (RSA, 2014); the creation of a Northern Futures initiative by the Deputy Prime Minister (DPM, 2014); moves to establish high speed rail routes between northern cities (HM Treasury, 2014); and annual reviews of cities' economic performance from the Centre for Cities, with the latest demonstrating distinct spatial patterns between cities experiencing fast, slow and little growth (Centre for Cities, 2014).

3.2 All reports are attempting to assess the long term prospects of cities against a backdrop of public sector cuts, austerity measures, a growing disparity between the north and south of the UK, and the lack of private sector investment in some northern cities. But with the notable exception of both the Foresight project on the Future of Cities (GOS, 2014) and the Innovate UK Cities Catapult (in 2013), these studies have rarely attempted to undertake a more place-based scientific approach to their analysis of trends, taking a synoptic perspective, examining cross-sectoral policy influences or building capacity for long term thinking about the future.

04

WHAT ROLE FOR UNIVERSITIES?

4.1   In the absence in government of scientific coordinating and integrating mechanisms at the city scale universities, through Foresight place based mechanisms, can enhance their role as urban 'anchor institutions', with the academic community assisting in urban knowledge creation and sharing to inform policy and practice that has a bearing on the future of the city (e.g. Goddard and Vallance, 2013). In the past few years the concept of local 'anchor institutions' has grown beyond its origin in U.S. urban policy and started to gain a wider currency. The concept of anchoring lacks a precise or consistent definition but generally refers to large locally-embedded institutions, typically non-governmental public sector, cultural or other civic organisations, that are of significant importance to the economy and wider community life of the cities in which they are based . The presence of these institutions is understood to generate positive externalities and relationships that can support or 'anchor' wider economic activity within the locality. According to the Work Foundation:

"anchor institutions do not have a democratic mandate and their primary missions do not involve regeneration or local economic development. Nonetheless their scale, local rootedness and community links are such that they are acknowledged to play a key role in local development and economic growth, representing the 'sticky capital' around which economic growth strategies can be built." (The Work Foundation, 2010, p.3).

4.2   City based Foresight activity is one means by which the global knowledge base and influence of the academy is unlocked for the benefit of the city where it is based

4.3   This can be achieved by universities:
- fostering networks across and between the public, private, voluntary and community sectors
- identifying gaps in intelligence within cities, sector by sector;
- facilitating the exchange of intelligence and data between different agencies;
- developing long term scenario options;
- synthesising and mapping the varying strands of intelligence and data that exist within each city region; and
- mediating between government and citizens by actively engaging with service providers and others.

4.4   In the context of the uncertain futures confronting cities, there are six inter-related challenges that lie ahead in governing the long term future of urban areas. These are:
- assessing the assets of and inter-relationships between cities and infrastructure at the present time;
- identifying major gaps in knowledge/intelligence regarding future economic, technological, environmental and social drivers;
- encouraging the transfer and sharing of existing data sets and intelligence relating to the same spatial area held by disparate agencies;
- synthesizing as far as possible different data sets with mapping exercises and applying policy scenarios through infrastructure and cities themes;
- undertaking systems thinking and scenario development in the city with key sectors and agencies in the urban area responsible for service provision, investment and regulation; and
- disseminating knowledge, intelligence and data to citizens as new approaches and findings are made, and utilising new technologies in communicating those ideas.

4.5 Such activities accord with a growing recognition of the civic role of public universities as they seek to respond to major long term societal challenges such climate and demographic change that have local as well as global manifestations. Universities such as UCL (Sustainable Cities Grand Challenge), LSE (Cities Programme), Manchester (Cities@Manchester), Liverpool (Heseltine Institute), and Newcastle (Societal Challenge themes) are marshalling their research under a single banner although with varying degrees of focus on the future of their cities. More fundamentally some of the universities that were established to support 19th Century city based industrialisation are looking to re-invent themselves as 'civic' institutions but now operating within a global economy. (Goddard 2007; Goddard, Kempton and Vallance, 2013). Indeed Foresight activity linking the global and the local could be seen as one marker of the civic university.

4.6 It could also be seen as a manifestation of the importance increasingly given by research funding agencies to engaging local civil society in processes of co-production of knowledge, and its translation into innovation, dubbed by the European Commission 'Responsible Research and Innovation' (RRI) and recently recognised by the Rome Declaration (EC,2014). City based Foresight also embraces processes of open innovation championed by the European Commission in the following terms:

"Open Innovation 2.0 (OI2) is a new paradigm based on a Quadruple Helix Model where government, industry, academia and civil participants work together to co-create the future and drive structural changes far beyond the scope of what any one organization or person could do alone. This model encompasses also user-oriented innovation models to take full advantage of ideas' cross-fertilisation leading to experimentation and prototyping in real world settings"

4.7 We talk about principles of integrated collaboration, co-created shared value, cultivated innovation ecosystems, unleashed exponential technologies, and extraordinarily rapid adoption. We believe that innovation can be a discipline practiced by many, rather than an art mastered by few. There is much that needs to be done to properly establish OI2 in Europe. This is why policy makers must make serious efforts to strengthen the framework supporting open innovation approaches. There are 5 key elements in the new Open Innovation process:

- Networking;
- Collaboration: involving partners, competitors, universities, and users;
- Corporate Entrepreneurship: enhancing corporate venturing, start-ups and spin-offs;
- Proactive Intellectual Property Management: creating new markets for technology;
- Research and Development (R&D): achieving competitive advantages in the market.

4.8 In the Foresight process universities and cities can identify assets and opportunities through: the dissemination of existing data and intelligence to varied audiences; the provision of new data and intelligence; developing systems thinking across fragmented governance and delivery bodies; promoting new networking relationships between actors and agencies; and undertaking futures work that relates more readily to circumstances in each city than thematic exercises relating to a single knowledge domain.

04

05

METHODOLOGY

5.1 In any Foresight project, whether at a national or regional level, one of the key challenges is bridging the gap between expert scientific knowledge required to understand fundamental issues at stake and the tacit knowledge held by those who will be affected by any decisions about the future. This is particularly the case when the future of cities is the topic for a foresight project. Cities are themselves complex systems in a constant state of flux and subject to a barrage of forces both internal and external. Many of the choices facing cities in the future could be termed 'wicked' problems, i.e. those that are complex, or cross both administrative and functional boundaries, and have no clear or permanent solutions (Agranoff and McGuire 2003; Koppenjan and Klijn 2004). In most cases 'technical solutions' to the problems facing cities in the future will be based on subjective understandings of the institutional structures through which cities function and which embrace the public and private sectors and civil society in a quadruple helix and therefore will have both their champions and their detractors.

5.2 In the centre of these debates/discussions/arguments about the future of cities there needs to be a governance structure which provides the social and ideological space for the information, both scientific and tacit, to flow between all interested parties and which maintains the legitimacy, either through democratic or participatory means, to deliver the long term strategic planning resulting from any deliberations.

5.3 The Newcastle City Futures 2065 project therefore sought to build on the academic knowledge and experience developed over the past few decades within Newcastle University and other key stakeholders in the future of the city, as well as the knowledge and practice developed by the national foresight project, to test and evaluate a series of methodologies capable of engaging on a city-wide basis the full spectrum of actors in producing a platform for discussion of long term visions for the city. Following the national Foresight model a Lead Expert Group drawn from the universities and city stakeholders was established. The Group had oversight of and participated in the following activities:

1. Baseline evidence gathering

2. A public visual exhibition and discussion forum, named Newcastle City Futures

3. A research and literature database focusing on the city region

4. Stakeholder workshops

5. Delphi surveys

6. Scenario building.

5.4 The combination of methods in addition to being a means to an end also sought to be an end in itself. Within England following the abolition of a regional governance structure outside of London after 2010, with the winding up of Regional Development Agencies, Regional Spatial Strategies and – in the north of England – the 'Northern Way' sub national growth initiative (all of which were agencies that had possessed a strategic coordinating function; see Swain et al., 2013), individual cities are grappling to access the right sort of intelligence from a range of different operators to make informed choices on the future of their territories; this is also affecting the quality and extent of traditional long term planning arrangements (Hall, 2014). The onset of localism and decentralisation of policy making, the establishment of Local Enterprise Partnerships (LEPs), and a statutory duty to cooperate between local authorities, are perhaps pale imitations and poor substitutes in the context of broader structural challenges facing the UK (Ricketts and Field, 2012; Pugalis et al., 2012; Ward and Hardy, 2013). It is into this void in strategic planning and governance that universities have the potential to fulfil a role of civic universities and provide the necessary space deliberations and debates to inform such strategic planning. The series of methods therefore also sought to establish a community of interest and of place that will have the necessary capacity and leadership to deliver plans once developed. This now takes the form of a formally constituted Newcastle City Futures Development Group.

06

BASELINE EVIDENCE
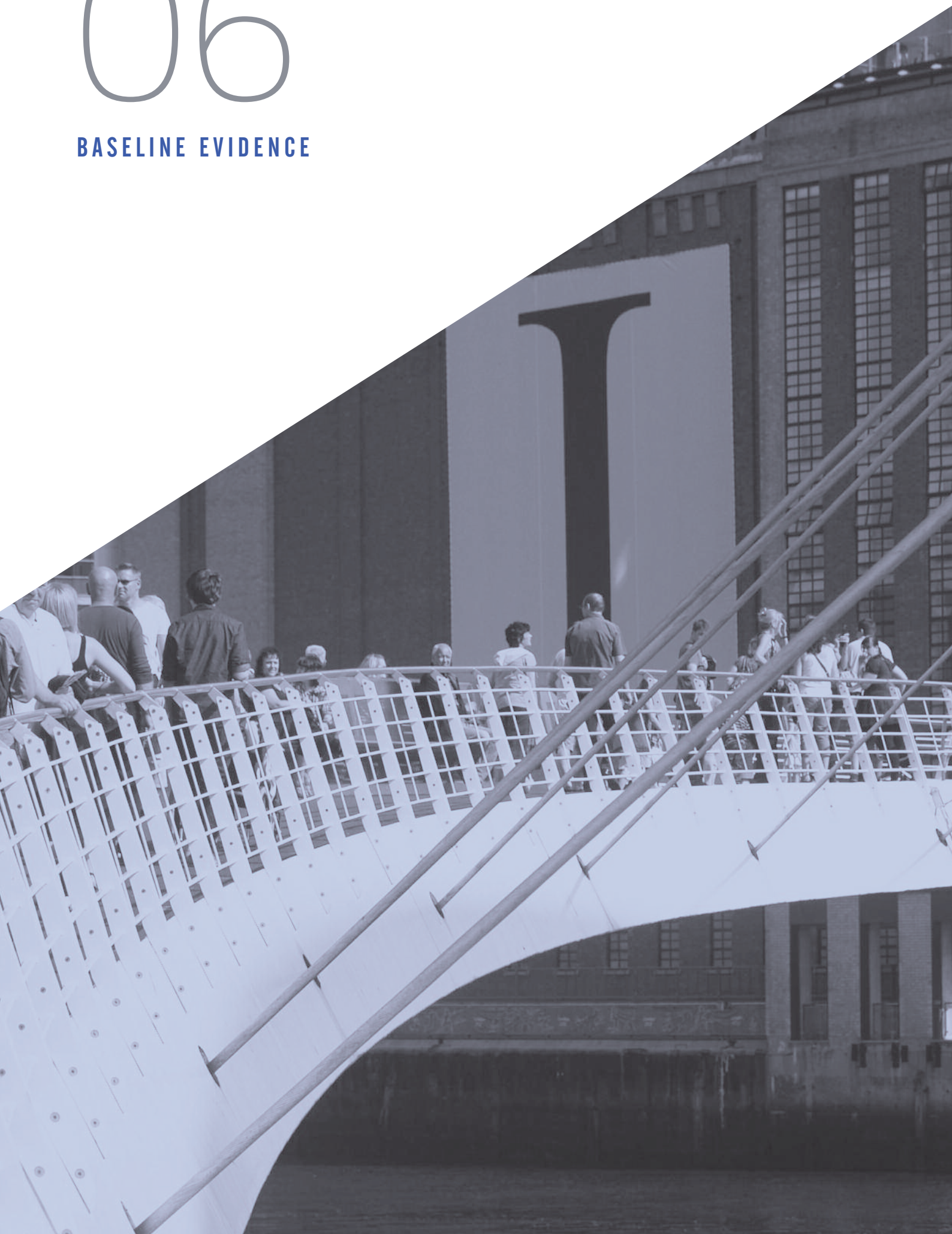
6.1   The first of the methods used by the project was a desk-based evidence gathering process which sought to understand the present situation facing the region within which Newcastle is the dominant urban centre. The project was fortunate in that there have been a number of recent reports outlining the current socio-economic conditions of the region: The Adonis Report; The Third Sector Trends Survey from the Northern Rock Foundation as well as data from the Office for National Statistics. This data was benchmarked against national and other regional data to show the relative strengths and weaknesses of the region.

6.2   Located on the River Tyne, Newcastle and Gateshead are the geographic and economic hub of the North East region. It is the main focus of economic growth within the region, and spreads the benefits of this growth to surrounding areas. In general the region performs below average on a number of socio-economic indicators; economic activity, educational attainment and health. The baseline evidence also highlighted some positive attributes of the region: for example the North East is the only region outside London with a positive balance of trade.

6.3   More specifically, there are a number of issues that are worth considering. But before setting out some key issues, let us consider history and structural issues by employing a backcasting method.

Figure: Newcastle and Gateshead at the heart of the North East region of England. Source: www.research.ncl.ac.uk

History and Development

6.4 The origins of Newcastle can be traced back to Roman times when the Emperor Hadrian, having completed the wall bearing his name across Britain in AD122, built a bridge over the River Tyne at a narrow part of the river where the Swing Bridge is located today at the heart of the city and urban region. A fort was also constructed above the river on the north shore and a small settlement grew on the steep sided bank sloping down to the bridge. This marked the original end of the wall although it was later extended to Segendunum, modern day Wallsend, further along the river.

6.5 After the Romans departed in the fifth century, the settlement became a ruin although fell into the hands of the Anglo-Saxons when it was immersed into the kingdom of Northumbria and known briefly as Monkchester. In Norman times, the fort was strengthened as a base for the suppression of rebellious north of Britain and the Scots. It was this structure, the New Castle, that gave the town its name. A town wall was constructed after 1265 with six principal gates that still give their names to parts of the city centre.

6.6 Newcastle flourished after medieval times thanks to the development of early quayside port facilities that allowed ships and trade to enter and leave the river. A merchant city developed, supported by royal charters, and coal started to become the principal export commodity; even as early as 1603, over 160,000 tonnes of coal were shipped from Newcastle to domestic and international markets, a figure that would grow to 450,000 by 1634. Newcastle gained a monopoly over coal exports to the detriment of other east coast ports. Coal workings were located to the west of the town and in north Tyneside. As coal and shipping grew, other industries emerged across Tyneside including glass manufacturing and salt production, and this growth in commercial activity supported new ports at North Shields and South Shields. By 1801, the population of Newcastle had grown to 28,000.

6.7 The city developed in a grand manner from the latter half of the 18th century with the design of classic Georgian buildings and boulevards. Richard Grainger (1878-1861), with his architects including John Dobson (1787-1865) and Thomas Oliver (1791-1857), laid out some astonishingly fine streets at the heart of the city including Eldon Square, Leazes Terrace, Grey Street, and the market buildings, collectively known as Grainger Town.

6.8 Railway development had commenced in the North East with George Stephenson (1781-1848) at his locomotive works in Newcastle in the 1820s. The locomotive engine and the spreading out of railways from the North East to the industrial areas of the UK and, eventually, worldwide transformed the region's fortunes such that it could boast of itself as an engineering powerhouse. The railway from London had reached Gateshead by the 1830s, but it was not until the construction of the High Level Bridge by Robert Stephenson (1803-1859) in 1849 that a station for Newcastle could be constructed within the city. The magnificent Central Station was opened the following year. The railway development and industrialisation caused the urban expansion of the city into surrounding rural hamlets.

6.9 Faced with the prospect of coal being transported to London markets more easily by rail, the northern coalowners responded by building more dockyard facilities for coal transfer by ship and, in the process, boosted the shipbuilding industry. With the existing skills and innovation in the region, shipbuilding further enhanced the economy of Newcastle by developments in marine engineering. Starting off with colliers and barges, successive companies constructed steam turbine ships, torpedo boats, warships and passenger liners, notably the RMS Mauretania in 1906. A towering figure in Newcastle's history during the 19th century was William George Armstrong (later Lord Armstrong, 1810-1900), inventor, engineer and entrepreneur, who invented steam hydraulic cranes. The region became world renowned for the construction of cranes, hydraulic equipment, bridges and eventually armaments and warships and other large specialist vessels, centred in the works on the riverside to the west of the city centre. The Armstrong Whitworth company went on to construct bi-planes, tanks and armoured vehicles, employing 178,000 people by 1945. Industrialisation also occurred on the Gateshead side of the Tyne with ironworks, glassworks and port facilities.

6.10 Residential property building occurred at pace between the 1860s and the outbreak of world war I with the building of 'Tyneside flats', terraced housing but with ground and first floors of each 'house' occupied and owned freehold by different families. Recreation was provided in Newcastle by the designation of open spaces; the Town Moor Improvement Act of 1870 designated two 35 acre sites as parkland. One part of the Town Moor, Exhibition Park, was the location of the North-East Coast Exhibition in 1929, a celebration of the region's industrial achievements that attracted over 4 million visitors. Educational facilities had been endowed by Lord Armstrong with the setting up of a College of Physical Science in 1871; subsequently renamed Armstrong College in 1904, and was incorporated into the University of Durham shortly afterwards. This formed the core of Newcastle University that branched out as a separate university in 1963.

6.11 The economy had been dependent on shipbuilding, engineering and manufacturing into the 20th century. Uniquely, all three industries relied on each other and all relied on coal. After the end of war in 1918, demand for armaments and exports declined sharply causing significant unemployment with rates at 40 or 50 per cent in some areas after the General Strike of 1926 and continued through the 1930s. In 1923 274,000 people lived in Newcastle and, despite the downturn for the regional economy, the shopping and commercial areas thrived. The Tyne Bridge, funded by the UK Government, opened in 1928 to ease traffic on the existing river crossings. Shipyard closures escalated and one of the more prominent, Palmers in Jarrow, east of Newcastle and Gateshead, eventually led to the Jarrow Crusade of 1936 as Jarrow's unemployed shipyard workers marched to London to plead their cause. The UK Government responded to the depression by designating a series of trading estates around Britain; one of these, the Team Valley, is located in Gateshead. At the same time, suburban housing development occurred allowing more prosperous residents the opportunity to move further outside the urban core, including new programmes of council house building.

6.12 Shipyards and armament factories galvanised with the onset of World War II causing an economic recovery for the region. Armament production was short lived but shipbuilding continued at a pace into the 1960s with the building of cargo ships and passenger vessels. In the postwar period the unemployment rate reached an all time low and salaries increased. A series of infrastructure projects were planned from the 1950s and saw implementation through the 1960s and 1970s. The Tyne Road Tunnel and the new Scotswood Bridge were both opened in 1967 to cater for the increase in road traffic. Newcastle's new Civic Centre at Barras Bridge in the city centre was opened by King Olav V in November 1968. The city council was the first local authority in the UK to appoint a Chief Executive and employ a cabinet government system. The leader of Newcastle City Council 1960-65 was T. Dan Smith (1915-1993), who revolutionised the local authority and, with his chief planner Mr (later Sir) Wilf Burns (1923-1984), embarked on a major long term renewal and infrastructure programme. But it was Smith's subsequent corruption trial that most residents remember him for.

6.13 New rail and road developments initiated at this time include the decision to construct the Tyne and Wear Metro, a light rapid transit system (opened in 1980), and the Central Motorway, an ambitious road construction programme for the city centre. The metro was designated to take over a run down and underused 26 mile network of existing local rail lines. Extensions have occurred to the airport (1991), north west of Newcastle city centre, and to Sunderland (2002). Further developments are proposed and are contained within a 2030 strategy document but they remain ideas at this time. Only about a half of the motorway scheme was constructed but the opening of the central section allowed traffic to be diverted away from Northumberland Street, the principal street through Newcastle for the A1 London to Edinburgh road. Northumberland Street became pedestrianised in stages from the 1970s and has become the main retail way for Newcastle. Grey Street and the area around the Monument have been part pedestrianized; new cafes and restaurants have opened to create a café quarter. Newcastle Airport had opened in 1935 but grew rapidly in the 1950s and 1960s. The North East Regional Airport Committee authorised an ambitious plan for expansion in 1963. Passenger growth continued across the decades, reaching 1 million by 1980 and has continued since with further developments. The airport is 51 per cent owned by the seven North East local authorities. Both Newcastle University and Newcastle Polytechnic (now Northumbria University) have undergone significant expansion over the last 50 years and occupy a distinct part of the north east corner of the city centre close to the Civic Centre.

6.14 Significant public housing schemes were also constructed in place of obsolete terraced housing with major schemes opened at Cruddas Park, Kenton, Killingworth and Byker. The Byker complex, also known as Byker Wall, was designed by Ralph Erskine (1914-2005), and is a celebrated scheme designed in partnership with residents. It is a design that has stood the test of time compared to other public housing schemes that have proved to be less resilient. New towns were designated in Washington, Peterlee and Aycliffe to accommodate population and new industry from the older industrial areas of the north east. The first indoor purpose built shopping centre in the UK, Eldon Square, opened in Newcastle in 1977 and has been redeveloped and extended since. Parts of the city centre were redeveloped in a modern style in the 1960s and 1970s, including areas in and surrounding the Georgian Grainger Town, a subject that can still cause public resentment. In Gateshead, the town centre – located on a high point overlooking both the River Tyne and Newcastle opposite – was dominated by the Brutalist modernist designed Trinity Square Shopping Centre and Car Park designed by Owen Luder (b.1928) and Rodney Gordon (1933-2008). Also known as the 'Get Carter' car park (after it was used as a film location in the 1971 film of that name), it was never particularly successful and could be seen from most parts of the city centre. It languished until demolition in 2010 but split opinion locally about whether it should be retained on architectural and cultural grounds.

6.15 1981 saw the first Great North Run organised, a half marathon between Newcastle and South Shields, a hugely successful event that has become established in the global sports calendar and as a culturally-rich weekend for Tynesiders. Newcastle and Gateshead host premier league football, rugby and athletics facilities, and county cricket events occur in County Durham. The city and river have also hosted the Tall Ships race. The Metro Centre, a purpose built regional shopping mall of 195,000 square metres, opened in 1986 to the south west of Newcastle and Gateshead town centre. This has taken some trade away from Gateshead town centre that remains an area in need of further investment, although Newcastle's city centre footfall remains strong. Two major inward investments occurred in the region in the 1980s with the opening of the Nissan car manufacturing plant near Sunderland and Siemens engineering plant at Stockton-on-Tees. The region was also adept at creating call centre jobs in the 1980s and 1990s.

6.16 The Tyne and Wear Urban Development Corporation (UDC) was designated in 1987 to redevelop the riversides in both Newcastle/Gateshead and Sunderland. The UDC was charged with making the riverfront accessible for employment generation and city centre living, while cleaning up some of the industrial pollution legacy. This caused a renaissance for the quayside in Newcastle and attracted commercial venues while improving the public realm through good urban design. Simultaneously, Gateshead Council embarked on a regeneration programme on the south side of the river. It commenced with the hosting of the National Garden Festival in 1990 and the programme eventually saw the building in 2001-4 of the Sage Concert Hall designed by Norman Foster, the opening of the Millennium ('blinking eye') Bridge, and the conversion of the Baltic Mill into a contemporary arts gallery. Newcastle and Gateshead have thrived as an international exemplar of culture-led regeneration causing an increase in service sector employment and the number of tourists visiting the city. In 2000, Newcastle was voted the 8th most popular 'party city' in the world.

6.17 Developments occurred throughout the 2000s and continue into the 2010s. A Housing Market Renewal initiative was established in Newcastle and Gateshead which caused the demolition of surplus terraced housing, particularly in parts of the west end in Scotswood and Benwell, but did not lead to the rebuilding of houses and communities prior to the initiative's closure. This led to a number of areas of derelict building plots that did not enhance the areas in the eyes of residents or visitors. The NHS and Newcastle University collaborated to build the Centre for Life adjacent to Newcastle station to promote life sciences and this was opened in 2000 with a new science museum attached. Newcastle University was also instrumental in purchasing a large area of 24 acres on the west side of the city centre to construct Science Central, a development of science, business and housing projects. This initiative is intended to develop over the long term. South of the railway station, the Stephenson Quarter is a mixed-use development project intended to regenerate a long disused part of the riverside area where George Stephenson had his locomotive works. This project is currently underway. The Grade I railway station was redeveloped in 2014 and a new southern entrance, to allow a route directly into the Stephenson Quarter, is earmarked.

6.18 The recession of 2007 caused some business closures but the city weathered the storm relatively well; other small urban centres in the region and neighbouring Sunderland have not faired so well. The post-2010 public sector cutbacks, however, have made a significant impact to public services in the city. High levels of youth unemployment, pockets of deprivation, poor public health and a reliance on benefits are noticeable in distinct areas of the city.

Demographics

6.19 The population of the city of Newcastle upon Tyne rose from 266,200 in 2001 to 280,200 in 2011. In 2012 Newcastle's population was 282,400, an increase of 5.7 per cent since 2001. 2011 estimates of population suggested the city's resident numbers would increase to approximately 298,700 by 2021, a figure that is now considered to be under-estimated. Newcastle and Gateshead's combined population is 381,100 (2011), within a Tyneside population of 879,996. The average age of a Newcastle resident is 37.8, slightly below the national figure of 38.6. In 2011 some 16,670 children were living in poverty in Newcastle; deprivation is higher than the UK average; 25 per cent of people live in an area of Newcastle that are amongst the 10 per cent most deprived in the city.

6.20 There are significant numbers of older people in Newcastle and Gateshead (15.6 per cent of the population is 65 or over), and the number of older people is projected to rise by almost a third by 2030. Newcastle has a higher proportion of working-age population (16-64) at 70.1 per cent, and a lower proportion of older people (14.2 per cent) than Tyne and Wear overall (66.5 per cent and 16.5 per cent respectively), while Gateshead has the reverse (64.6 per cent and 17.8 per cent respectively).

6.21 The health of residents is improving but remains worse than the national average. Life expectancy is lower in Newcastle than the average for England, with a difference of 14.3 years for males and 11.1 years for females in the most deprived wards when compared to the least deprived wards. The Health Survey for England 2006-08 suggested estimates for adult obesity of 28 per cent for Gateshead and 24 per cent for Newcastle, compared with a national average of 24 per cent. Some 21.9 per cent of Year 6 children were classed as obese in 2011, while teenage pregnancy figures are higher than for England as a whole. Between 2001 and 2011, mortality rates from heart disease and cancer fell but were still worse than the average for England.
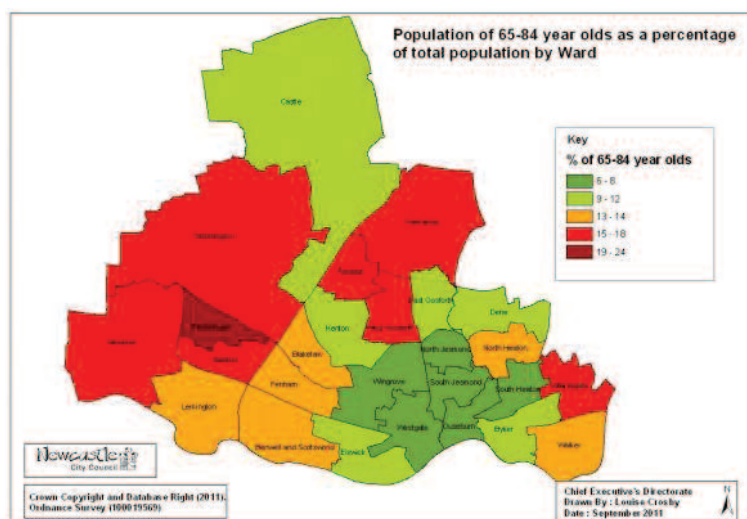
Figure. Population of 65-84 year olds as a percentage of total population by ward, Newcastle upon Tyne, 2011. Source: Newcastle City Council.

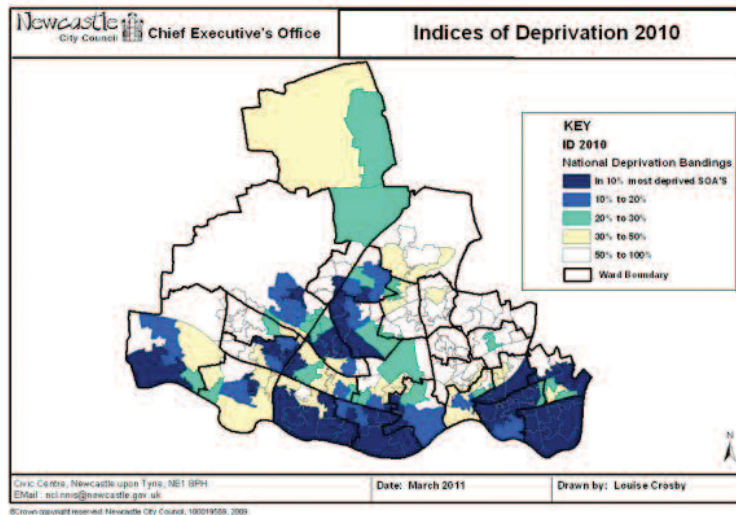Figure: Metro Map of Life Expectancy for adults aged 55. Source: Newcastle University Institute for Ageing http://www.ncl.ac.uk/ageing/innovation/engagement/simulation.htm

Figure. Location of deprivation in Newcastle upon Tyne, 2010. Source: Newcastle City Council.

6.22 Despite the overall population increase, there remains a trend of net out-migration from Newcastle and Gateshead to the surrounding areas. The majority of these out-migrants are middle age and are families. Newcastle loses population to North Tyneside. Gateshead loses population to neighbouring Durham and, to a lesser extent, Northumberland.

Growth and the Economy

6.23 The region was reliant historically on traditional industries including shipbuilding and coal mining. In recent decades there has been a shift towards service sector employment. There were 12,595 businesses in Newcastle and Gateshead in 2008, an increase of over 1,200 on the previous five years. Approximately one third of the jobs were in the public sector (a figure likely to decrease as a result of austerity measures), 17 per cent in business services, and 15 per cent in retail and distribution. Manufacturing still plays an important role in the region: one might say it is in the genes and accounts for 10 per cent of jobs. Industrial areas remaining in Newcastle and Gateshead include the Team Valley, Follingsby Park, and Walker Riverside. The replacement of shipbuilding by a flourishing sub-sea sector has been a notable success story. Research for the LEP has identified three areas of economic activities where the city region has global competitive advantage:

• Sub-sea and offshore technology

• Life sciences and health

• Creative, digital software and technology based services

http://nelep.co.uk/wp-content/uploads/2014/11/north-east-lep-smart-specialisation-report.pdf

6.24 In terms of economic activity, Newcastle and Gateshead form the key employment location in the North East, and the main driver of city-region growth. 265,000 people work in Gateshead and Newcastle every day, including more than 100,000 (ONS) commuters from the rest of Tyne and Wear and the wider catchment area. The number in work in the city of Newcastle upon Tyne in 2014 was 143,200, representing 66.5 per cent of residents, compared to a GB figure of 79.4 per cent. The unemployment figure in January 2015 was 8.5 per cent (5.8 per cent nationally), the highest rate of any region in the UK, and gross weekly pay was £482.20 full time compared to a GB figure of £518.10. Those employed in managerial, professional occupations represent 42.2 per cent of the workforce, lower than the national average of 44.1. The number of Job Seekers' Allowance claimants at January 2015 was 5,548, the lowest JSA claimant numbers of all the core cities. Newcastle is among the highest ranking areas in England for digital exclusion, with 31 neighbourhoods (at Local Super Output level) classified as deeply digitally and socially excluded (see figure).

6.25 Educational attainment is marginally lower than the figure for England and Wales: those with NVQ4 and above represent 34.9 per cent of the population in Newcastle, against 34.9 per cent nationally. The number without qualifications is 11.8 per cent, compared to the UK average of 9.7 per cent. GCSE attainment is worse than the English average. The housing tenure of the city is in marked contrast to the national picture, with just 49 per cent in owner occupation, compared to a UK figure of 68 per cent; 23 per cent live in local authority housing and a further 6 per cent in housing association stock.

Average salary, Newcastle vs UK regions (2014)

£25,710
Scotland

£24,882
North East England

£24,375
North West England

£24,247
Newcastle Upon Tyne

£22,892
Northern Ireland

£24,428
Yorkshire & Humberside

£24,867
East Midlands

£25,931
West Midlands

£25,147
East Anglia

£24,142
Wales

£32,918
London

£24,730
South West England

£26,327
South East (excl. London)
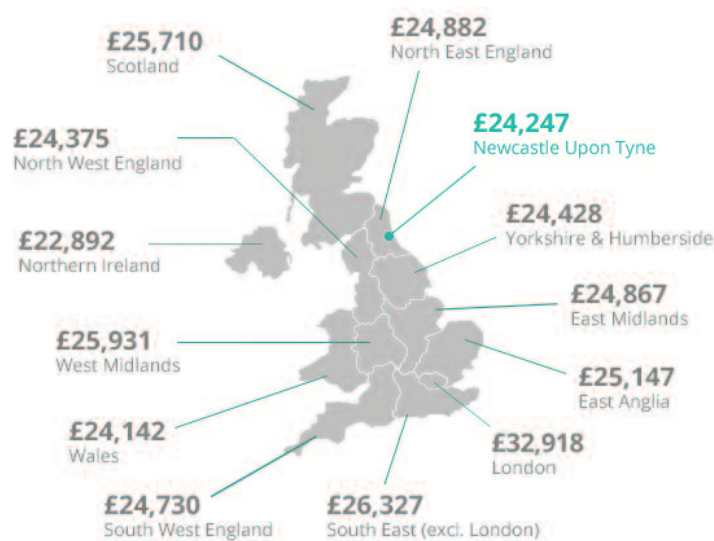
Figure: Average salaries in Newcastle upon Tyne compared to other UK regions, 2014.
Source: http://www.reed.co.uk/career-advice/discover/destinations/newcastle-upon-tyne

6.26 Despite the recession after 2007, Newcastle and Gateshead's economy has performed strongly. But there is evidence to suggest relatively limited business formation, and poor business survival rates. Primary employment in the city is centred in health, education, public administration, professional services, and retail (see Table). Worklessness remains a problem, especially in some of the deprived urban neighbourhoods. Between 2000 and 2008, there was a reduction of 13,500 workless people across the two councils' areas. There has been an increase in this figure of 4,000 since 2008 but still represents a reduction of almost 10,000 people since 2000. But the economy still lags behind the national average for employment, skills and earnings. The location, accommodation, and access requirements of new forms of business are often very different from those of firms that are in more traditional sectors. Academia and research remain core economic assets with two colleges (Gateshead and Newcastle) and two universities (Newcastle and Northumbria) that together host around 107,000 students. But graduate retention is a problem, as with all core northern cities.

Table: Primary employment in Newcastle upon Tyne by percentage (TWRI, 2011):

Manufacturing	5.0
Retail	8.6
Accommodation/food services	7.0
Professional services	8.8
Business support services	7.2
Public administration/defence	10.5
Education	11.6
Health	16.0
Arts/entertainment	5.0

6.27 Newcastle City Centre and the MetroCentre in Gateshead are the two principal retail areas and are ranked nationally 11th and 36th respectively. The two local authority areas possess a network of other centres, including Gateshead Town Centre, that provide shops, services and employment opportunities but there are wide variations between centres in terms of quality and quantity of shops and services provided.

Community Maps: Combined Digital and Social Exclusion Index, Newcastle upon Tyne

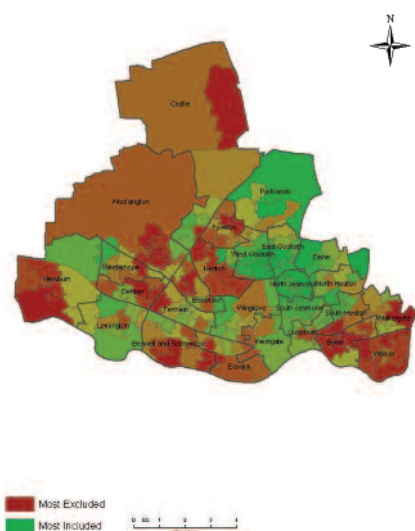

Most Excluded
Most Included

Figure. Community map of Newcastle upon Tyne showing combined social and digital exclusion. Source: ESD Communities http://www.esd.org.uk/esdtoolkit/Communities/DigitalInclusion/Maps/top/'NEWCASTLE_UPON_TYNE_TOT'.png

Environment

6.28 Newcastle and Gateshead has an extensive amount of open space with approximately 3,400 hectares. There are significant areas of high landscape quality, particularly in and around the Derwent Valley, in central areas such as the Town Moor, and in high-quality urban parks such as Leazes Park and Saltwell Park. The River Tyne has been transformed over the last 20 years with the removal of pollutants and has seen the return of otters and salmon, and supports the furthest-inland breeding colony of kittiwakes in the world. The coast of Northumberland is a mere 30 minutes away from the central urban area and offers high quality recreational opportunities with undeveloped coastlines, coastal paths and historic castles. Similarly, westwards, the Tyne Valley offers attractive scenery and villages, Roman remains of settlements and close proximity to the Hadrian's Wall World Heritage Site, with remote ruggedness of Kielder Forest Park and Northumberland National Park beyond. In 2013 a significant part of the region was designated as an International Dark Sky Park, the largest in Europe, recognising the area's tranquillity and lack of light pollution. There is scope to develop rights of way, and new or enhanced cycle networks both within and between the urban areas.
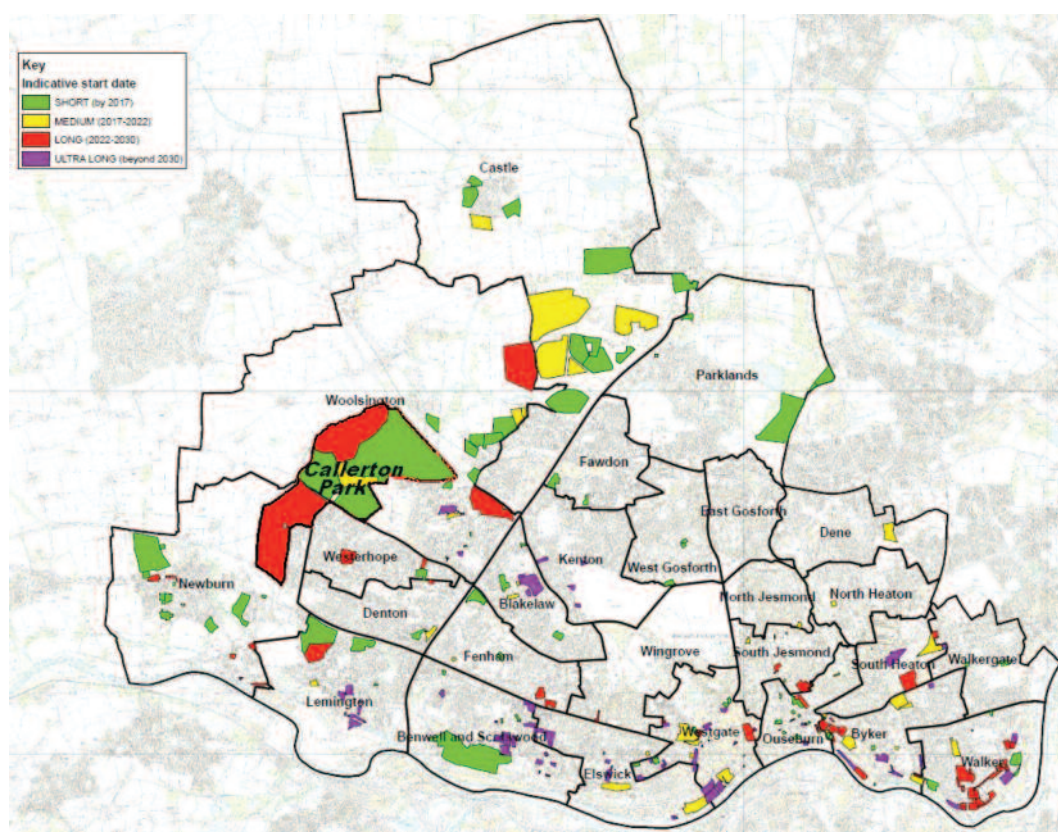

Figure: Potential new housing development sites in Newcastle upon Tyne long term. Source: Newcastle City Council.

Housing

6.29 Housing in Newcastle and Gateshead is varied, and there is a need for further investment and improvement. The housing market is polarised with strong markets in some inner areas (such as Jesmond and Gosforth) and low market demand and market decline in other inner areas (such as Bensham and Elswick). More prosperous areas are located beyond the boundaries of the city in Northumberland. In 2011, the mix of housing stock was very marked for Newcastle in contrast with the national average (in brackets), with 69.3 per cent owner occupied (82.1), 23.6 per cent local authority social stock (7.5), and 6.3 per cent registered social landlord stock (10.1). Parts of the west end of Newcastle and Gateshead were subject to Housing Market Pathfinder intervention in the early 2000s with the demolition of over 1,000 homes but redevelopment and new build has been slow with the consequence of empty building plots in built up areas. Identification of new housing development areas remains problematic within the boundary of Newcastle, and the recent One Core Strategy advocated the siting of new housing in previously Green Belt designated land, but in so doing attracted significant public opposition. With a projected increase in population, over 36,000 new homes will need to be provided to the period 2030 alone.

Mobility

6.30 Car ownership levels in Newcastle have risen dramatically over the years, with a 27.8 per cent increase between 1991 and 2001 compared to an England and Wales average of 26 per cent. In 2001 the number of cars in Newcastle was 81,617, but the city has the lowest car ownership rate in Tyne and Wear. 55 per cent of Newcastle's population have no access to a car, and although this suggests an indirect support for sustainability purposes, when linked to social mobility and opportunity, it creates other problems: 31 per cent of people without access to a car find it difficult to access local health facilities at a time when out of hours GP care is no longer as widespread as it once was; 18 per cent found it problematic to visit friends, family and libraries which may contribute to social isolation; and 16 per cent have difficulty in accessing supermarkets, to take advantage of a choice of goods and cheaper prices. There are distinct parts of the city that possess the lowest car ownership rates: Byker, Walker and Moorside (26 per cent), and West City (22.6 per cent), which correspond to some of the most deprived areas of Newcastle and where health concerns are the greatest.

Figure: car ownership levels have increased noticeably in and around Newcastle with congestion on principal routes. Source: Newcastle Journal.

6.31 Motorway and trunk road links in and out of the city remain in the course of development, with the main A1(M) route being upgraded between Tyneside and Yorkshire, and north of Newcastle to the Scottish border. The city, located on the East Coast Main Line, is served by Inter City trains that connect directly to other major centres including London, Edinburgh, Glasgow, Leeds, Sheffield, Manchester, Liverpool, Birmingham, and Bristol. Whilst Newcastle is at the northern terminus of the proposed electrified HS3 high speed Trans-Pennine line linking Liverpool, Manchester, and Leeds, the bulk of the development is for the Pennine section with suggestions of ensuring the improvement of existing links between the North East and HS3. Edinburgh and Leeds remain a 90 minute journey time away from Newcastle north (106 miles) and south (95 miles) respectively and there is scepticism in the region of the degree to which the city could benefit from possible investment in both the Scottish Central Belt and the Pennine Northern Powerhouse. Furthermore, under Network Rail plans for the future of the East Coast Main Line franchise after the completion of HS2, it is proposed to run services to and from Edinburgh via the high speed line rather than directly – as at the present time – from Newcastle. This will possibly sever Newcastle's high speed Inter City links to the Scottish capital. HS2 northbound services, terminating as super fast trains in the Leeds area, will run on to Newcastle to terminate but on existing slower lines.

6.32 The number of passengers using Newcastle railway station has increased from 5.73 million in 2004/5 to 8.03 million in 2013/14, reflecting a pattern seen across the UK in favour of rail travel. The Tyne and Wear Metro service, part privatised in 2010, has a daily passenger use in excess of 100,000 and in 2009//10 generated £40 million in income from ticket sales, the highest figure per passenger of any metropolitan transport system outside London. In 2010, the Government announced an investment programme of £580 million to support Metro infrastructure upgrading, improved electronic ticketing and maintenance costs. Nexus, the Tyne and Wear Passenger Transport Authority, the organisation that runs the Metro, has developed a long term plan to 2030 for Metro extension with possibly six new lines and the introduction of new rolling stock. At present there is no financial backing for the plan. Separately, Northumberland County Council has committed £20 million towards the costs of reopening passenger rail services between Newcastle and Blyth and Ashington to the north of the city. These are deprived communities currently served only by a freight rail connection to industrial and port facilities in the area. It is proposed to operate a Network Rail loop local passenger service from Newcastle to Morpeth. The possibility of reopening the route remains some years away. And there remain significant parts of urbanised Newcastle and Gateshead where accessibility is more problematic.
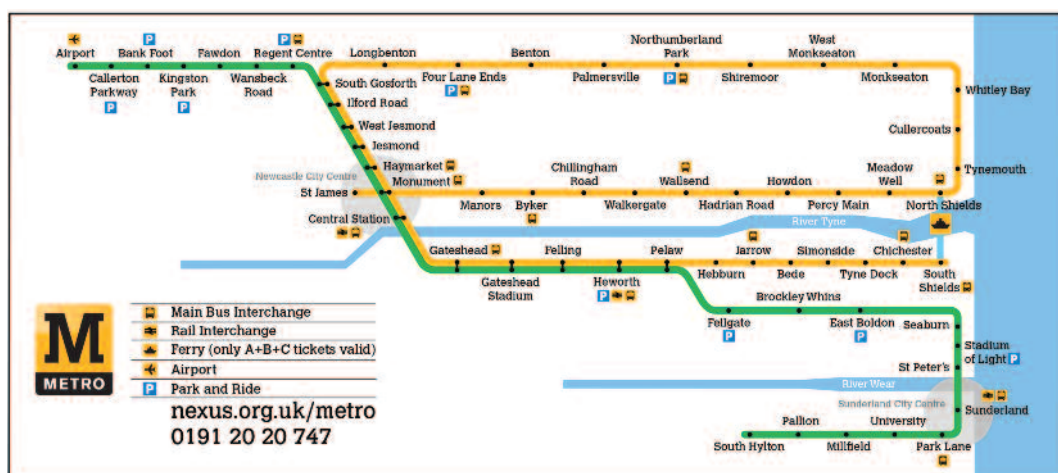

Figure: The Tyne and Wear Metro, route map as at March 2015. Source: Nexus.

6.33 Newcastle Airport, to the north of the city, is the fastest growing regional airport in the UK, and experienced a usage of 5 million passengers in 2011; it estimates that it will witness the doubling of passenger numbers to 10 million by 2016 and 15 million by 2030. The growth can be accommodated without the need for additional runway but could be adversely affected should the Scottish Government be granted the power to reduce or abolish landing charges at Scottish airports, and benefit by possible future expansion plans at London Heathrow. The airport is served by good road links to the regional trunk road system and by Metro line services directly to Newcastle (approximately 35 minutes away) and Sunderland (90 minutes). The airport has expansion plans to 2030 including the development of business parks on the south side of the airport, and has made enquires to the Treasury about the possible designation as an Enterprise Zone. The airport has also purchased land between the airport and the East Coast Main Line to enable the establishment of a fast city-airport rail service, but there are no firm plans or commitment to take this forward at present.

6.34 The Port of Tyne has been in existence in one shape or form since the Roman times and is one of the UK's major deep sea ports. At present there are two car terminals on the north and south sides of the Tyne, a cruise terminal at Northumbrian Quay, a ferry terminal at North Shields, and it possesses three rail terminals. £120 million has been invested in port facilities over the last ten years. The bulk and conventional cargo business of the port comprises coal, wood-pellet, grain, scrap, steel and other cargoes. Coal business has increased dramatically from zero in 2003 to 4.9 million tonnes in 2013 to the point that the Port of Tyne is now the UK's second largest coal importer. Car exports are significant in the port with transfer from Nissan and VW plant. An Enterprise Zone exists that covers three sites on the north of the Tyne, with a focus on offshore renewables and low carbon vehicle manufacture.

6.35 To deal with these issues, Newcastle and Gateshead commenced preparing a joint planning strategy, the One Core Strategy 'Planning for the Future', in 2011 to cover the whole of the authority areas of Gateshead and Newcastle to the period to 2030. The strategy was adopted by Newcastle and Gateshead Councils, following an Examination in Public, in March 2015. The two administrative areas between them cover approximately 255 square kilometres, with an estimated population in 2010 of 483,900. The One Core Strategy for 2030 has the following spatial vision objectives:

• Increasing economic prosperity by focusing business growth and other development within the Urban Core to reinforce its status as the major place of work, and the main shopping and visitor destination in the North East;

• Ensuring sufficient provision for identified growth sectors, focused at key employment locations and established employment and industrial areas, further contributing to increased prosperity;

• Reinvigorating Neighbourhoods and Rural Villages to create sustainable communities through regeneration and expansion where appropriate, to provide new affordable homes in lifetime Neighbourhoods, where the needs of all residents are met;

• Creating new sustainably linked Neighbourhoods providing areas of choice to support the increase in population;

• Ensuring development is deliverable and sustainable, by requiring additional infrastructure to be provided where needed, as set out in an Infrastructure Delivery Plan and through the Community Infrastructure Levy, and ensuring the provision of the full range of community and local facilities which contribute to health and wellbeing;

• Enhancing quality of place through the protection and enhancement of heritage assets, green infrastructure and other natural resources, and by ensuring that development is located in the most accessible locations, alongside positive action to address the impacts of traffic within the Urban Core and Neighbourhoods specifically; and

• Ensuring that Gateshead and Newcastle respond to Climate Change, providing opportunities for mitigation and adaptation.

Figure: The Newcastle Gateshead Core Strategy 2030 Key Diagram for Gateshead/the south side of the Tyne.
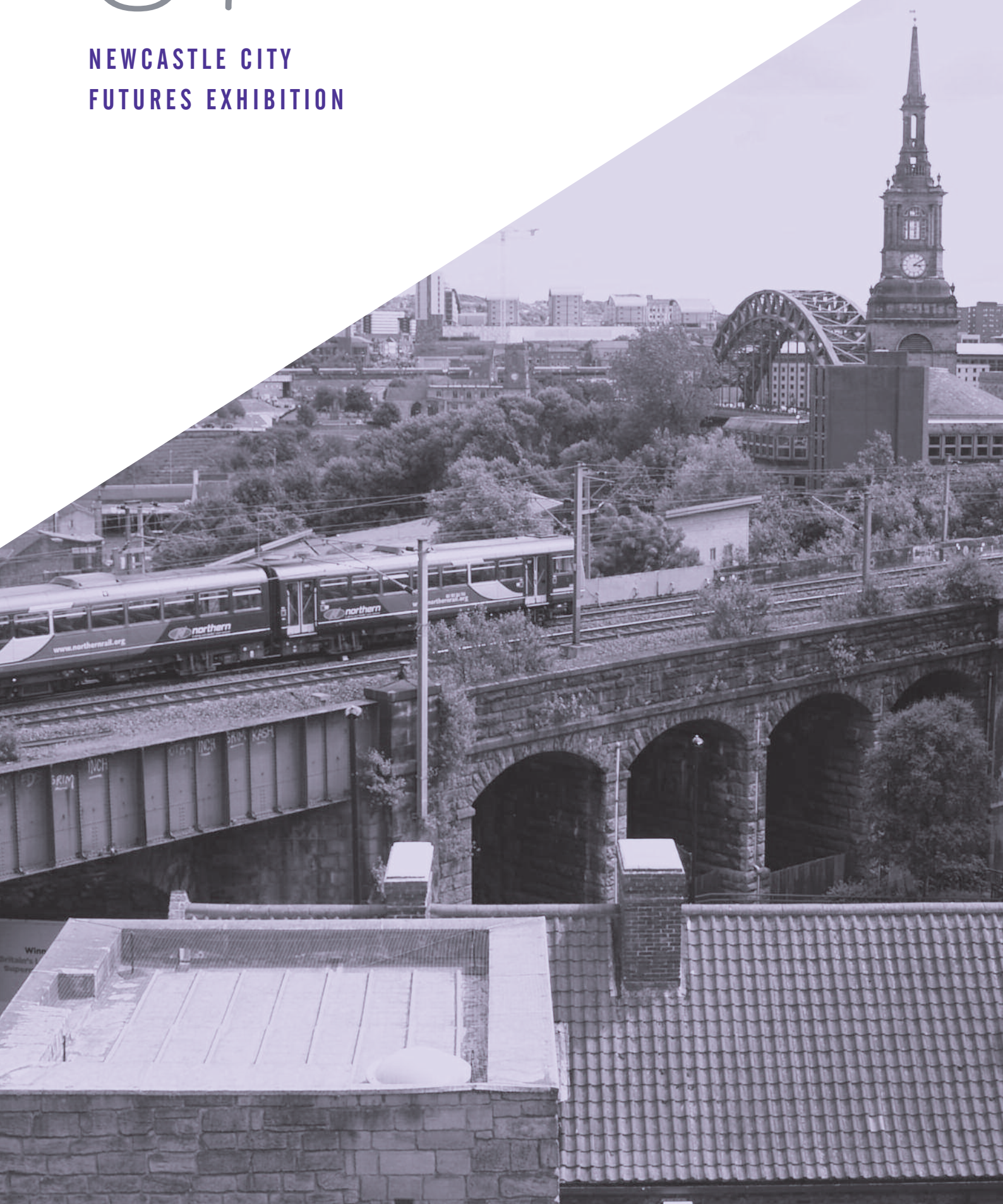
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Figure: The Newcastle Gateshead Core Strategy 2030 Key Diagram for Central Area of Newcastle and Gateshead

6.36 The baseline evidence was presented to the first stakeholder workshop and acted as a catalyst for further discussion about the assets and issues facing the region currently.

07

NEWCASTLE CITY
FUTURES EXHIBITION

7.1   A second important method that dovetailed with the initial scoping study for the project was the establishment of a temporary city futures exhibition and events space that looked at how Newcastle and Gateshead had always looked forward, and covered the period of the city's history since 1945. The intention here was to use imagery to initiate public conversations about change, to identify what had been built and what had not been built, and why (to backcast), and to stimulate a conversation about future developments. An essential element of the project was to consider opinions and ideas put forward by members of the public. The exhibition was funded by Newcastle University with the support and partnership of 24 organisations. See Appendices for the list of partners.

7.2   It was decided that an exhibition would be an innovative method to discuss the future of the city as much as the Foresight methodology. The ways in which governments and researchers engage and interact with citizens and create dialogues are being stretched or are even viewed as inadequate. Voter turnout in local elections remains low. Members of the public are increasingly turned off by party politics and formal governmental deliberations. Traditional public consultation methods are very much on the terms of those initiating the consulting – small timeframes within which society and individuals can express their views on pre-defined policies and proposals, and are often narrowly geographically focused. And even where more innovative participatory approaches are rolled out, there is some scepticism as to whether anything will change as a result of the efforts.

7.3   It was perhaps with this in mind that the Farrell Review discussed the importance of governments, professionals and others engaging positively with citizens on changes in the built environment (Farrell Review, 2014). The review report, "Our Future in Place", laments the current inadequate methods to engage communities on their terms. Farrell calls for the establishment of an 'urban room' in every town and city as a way of bringing residents into the heart of discussions about change. An urban room, he suggests, would be an exhibition space, a learning space, and a community space, and would explore the past and think about how to plan for the future.

7.4   The decision to pursue an exhibition in Newcastle coincided with Sir Terry Farrell's review. The inspiration was partly urban planning museums and design centres in many cities overseas, not least in China where most cities house grandiose urban planning museums and galleries, and partly seeing how cities change visually through photography and film. The experiment was not intended to form part of the formal Core Strategy statutory planning consultation methods, nor owned by the city council, professional planners, architects or developers. Rather, it was led by the University and forged from a partnership of public, private, community and voluntary groups in the city. It combined story telling, imagery, exhibition, and interactive events. It was housed in a city centre location neutral to any one organisation. Ambitiously, the University team set a goal to organise and create the exhibition and event series in May and June 2014, just six months after the initial decision to progress. It would be named "Newcastle City Futures" and would be financed by Newcastle University but would rely on material, support and goodwill provided by partner organisations.

The scope of the exhibition

7.5   Originally conceived as a small exhibition celebrating architectural and planning achievements in Newcastle upon Tyne since 1945, the event became a much larger exhibition, funded by Newcastle University but supported by 24 other partners across all sectors, and was utilised as a backdrop to a rich programme of events over a three week period that took place in the Grade I listed Guildhall, located in a prominent location on the Quayside adjacent to the iconic Tyne Bridge. The many historic artefacts on display in the exhibition were intended to act as a prompt to discussions, debates, and the launch of a 'big city conversation', jointly hosted by the University and its partners, which aimed to engage different communities in discussion about the city's change and renewal. The depictions of the recent past served as a prompt for imaginations about the future: How has the city changed physically since 1945? How have we viewed the city's future at different times? What has been built and unbuilt, and why? And what sort of city do we want to see develop over the next 50 years? The exhibition did not shy away from the more comprehensive and often-criticised 1960s planning solutions enacted by the then city council leader T. Dan Smith and chief planner Sir Wilf Burns but rather celebrate them rather than airbrush them out of Newcastle's history. Critically, the exhibition and events dispensed with planning syntax, the legislative and policy 'planning-speak', in order to open up discussions with all sections of society, regardless of age, and thereby create a common language for all. Posters were designed advertising the exhibition depicting monochrome photos of instantly-recognisable places in the city beneath the colourful Newcastle City Futures name and logo, under the leading question, 'What would you do?'

7.6   The exhibition was multi-media and comprised: exhibition boards with explanatory text and personal stories; historic films; oral histories from community members; an extensive photographic collection of many unseen pictures of the city between 1950 and 2000; city models showing change and built and unbuilt developments over time; and exhibition and models of significant future proposed developments.

7.7   More interactive elements sought to capture the public's views. A large oblique aerial photograph of the city was mounted on a pin board under the heading 'What would you protect?' and prompted visitors to identify buildings and places they liked by marking them with coloured pins. Postcards written by visitors could also be pinned alongside the photograph identifying possible future projects and new developments. Issues raised by visitors in this process included calls to fully pedestrianize historic Grey Street (Newcastle's equivalent to London's Regent Street), the introduction of cycle lanes, the extension of the Metro, a new southern entrance to the railway station, and the provision of affordable housing in the city centre. A family area was designated in one corner of the exhibition and free events for children run at the weekend targeted to different age groups, allowing the creation of new kids' visions of their city, a musical city soundscape initiative for teenagers, and map making activities. Plus there was Lego, playmats and drawing opportunities for those wanting to pursue less formalized fun. Children's imaginations were allowed to run riot, and among the ideas generated were plans for a Cat Hospital and an Ice Cream Skyscraper!

Public dialogue

7.8   At an early stage, the exhibition team (that overlapped in membership with the Foresight Project team) decided to make it more than just an exhibition, with the designation of a partners' space, dubbed the City Forum, within the Guildhall to allow partner organisations to present their plans and strategies for the future of Newcastle upon Tyne and Gateshead. This involved constructing a stage area, creating seats for 70 people, and setting up audio-visual equipment where none had existed previously. This gave the initiative much more of a contemporary feel with the platform allowing for the staging of presentations, films and panel debates, on Newcastle past present and future, and would allow audiences to engage directly with experts, officials, community and business leaders.

7.9   The Newcastle City Futures event was officially opened by the late Professor Sir Peter Hall on 23 May, and ran until 10 June 2014 when it was closed by Nick Forbes, the Leader of Newcastle City Council. Over 19 days, there were 2,400 visitors and 24 free events at the Guildhall, linking up 24 different partners across the city. It was a resounding success, forging new links between individuals and organisations and paving the way for future discussions about what the city could become.

7.10 Newcastle City Futures heard about long term expansion plans for both the Metro and the airport, considered the position of refugees in the city, how to develop an age friendly city, gave opportunities for discussion of economic growth and new architecture in the region, and the long term plan for the city centre site being developed by the university dubbed Science Central. It was risky asking partners to reveal their plans in innovative public facing talks and presentations that most of them had not experienced before, but they pulled through. Two new films about Newcastle were also screened. There were visits from both school groups and from business leaders who used the space to sell investment opportunities in the city. Partners and public agreed that it had been worthwhile. A photographer and filmmaker recorded events as they proceeded and there is a visual record and film for YouTube and the University websites.

7.11 The project provided a unique opportunity to explore planning as a long-term design process, and significantly demonstrate the role of exhibition design as a means of presenting resonant physical artefacts and historical imagery to fuel discussion about future planned propositions. A short video of the exhibition was produced and can be viewed here https://www.youtube.com/watch?v=EhsNsS4iHZU

7.12 Both the baseline evidence gathering and the city futures exhibition aimed to situate the discussion and provide a framework for thinking about the future. This is particularly important when considering the time horizons used within the foresight project. It is often difficult for individuals to imagine their own lives in 50 years' time never mind what the world will look like. There is often recourse to science fiction or other narratives to provide the basis for future thinking. This was something the project sought to avoid as a comment from a prominent stakeholder in the project made clear, "this should not be about flying cars!" Taking stock of the present and looking back at past future plans helps ground people's expectations and hopefully provides a more positive and realistic set of future scenarios.

Feedback and opinions from exhibition visitors

7.13 The exhibition and public forum, together with the interactive boards, enabled the public to offer their views about the future of the city. A visitor's book was placed in the exhibition for comments – these are set out in the appendices to this report. The public were also asked to look at a large oblique colour aerial photograph of the city and respond to the question, 'what would you protect and why?'. The responses were written on postcards and pinned to the side of the photograph. 104 comment cards were pinned in total over the three weeks of the exhibition. The following comments are those pinned to the board, they are not in any particular order; some card responses are excluded (e.g. drawings and sketches).

Responses:

Too many people in Newcastle. Don't feel comfortable when shopping in the city.

Great use of open space. Agree with comments on Grey Street – could become a great social area.
Most bars have opened on the unsunny side of the street. Closing to all traffic and extending to create plaza effect would make it more sustainable and encourage similar businesses to invest – it's happened in other parts of the country.

Make a southern entrance to the station for people working in Stephenson Quarter, and for a short cut avoiding the awfully polluted Orchard Street tunnel.

It all looks very good for central Newcastle, but I can't see anything for the west end. We had a few 'crumbs' thrown at us (signage, benches etc) along Stanhope Street and a huge Tesco is planned for the old General Hospital site, not needed or wanted by the local population. It would be lovely to see housing on the old General site, Angel Heights (listed building) made into singles accommodation, big old houses in Grainger Park turned into care homes for old people. Possible? I think so!

Public transport: ferry service from the coast down the River Tyne, stopping at city centre, then travelling further inland down the river. Also possible river taxis?

Fantastic city but why not better use the river itself. Hardly ever see any boat movements – such a pity.

Ask better questions, get better answers. Ask people to provide:

Newcastle's hidden gems

Newcastle's best square

Building with best interior

Favourite pedestrian route

Most comfortable space

Easiest and cheapest improvement

Favourite story about the city

Public space with best view

Building with the best story

Best unused building.

Although a massive undertaking, sinking the central motorway could remove a massive barrier in the city. Putting it in a tunnel between the Tyne Bridge and the old Great North Road at Barras Bridge at least, but a tunnel under the park as well could open the park up.

Continue to improve the river water quality and all of its tributaries ie Ouseburn to support fish and aquatic life. More taller buildings – it's rubbish to say that. Newcastle is not ready for 'skyscrapers'. More greenery within the city with well protected trees and shrubs. Thank you!

The Town Moor is very boring – can't it be landscaped with trees, paths, water features, playgrounds, gradients…? Student accommodation need to improve. I'm not a Jesmond resident but many who are complain about student density. Can't one get rid of HMS Caliope and complete the riverside improvement?

More thought into connections from Gateshead to the River and beyond to Newcastle. Newcastle Gateshead is very one sided.

Make better use of upstairs areas above shops and bars – many of these are derelict. If they were lived in the city would be busy at all times.

The central station is looking great and people will appreciate its grandeur eventually. I would like to see the railway network refer to Newcastle Central by its proper, instead of just Newcastle. Manors is also a functioning station. As it was probably the first central station, it should be called Newcastle 1st Central.

Should improve the city centre itself. Northumberland Street not so long ago was one of the best streets in the UK, number three after Oxford and Bond Streets. Sadly this is no longer the case. Need to improve paving, the flow of people, make better use of the side streets from Northumberland Street. Need to increase green areas on the street and provide good street furniture and lighting, bringing this great city into time with the rest of the UK cities.

Extend the metro to Blaydon – the tracks are already there! West Gateshead is often forgotten about.

Extend metro to Washington.

Protect footpaths/ways for pedestrians. The city population is ageing and it is becoming dangerous to walk due to illegal (but nothing done about it) cyclist movements. Walking is the most sustainable mode of transport yet largely ignored!

Greening:

- Roof gardens

- Wind turbines on roofs

- Solar panels on office block roofs

- Get rid of the grey/brown/dirty look of many areas

Pictures: Paint it on blank walls

Redevelop opposite the central station.

Informational panels –

The story of Newcastle is well told in dozens of information panels. Panels on the riverside. Panels by the Ouseburn. Panels by the town walls. Panels in the parks. Many panels are illegible, some are missing. How much would it cost to maintain such information? The decline of these panels indicates indifference or poverty or both.

I'd encourage more public space and better cycle lanes!

Better use of the river pleasure cruises that don't have to be booked in advance!

How about a large wind turbine on the Town Moor with a viewing platform, as at Swaffham? And need to open up the Bigg/Groat Market.

In the 1990s (I think) it was proposed that the buildings in the middle of the Bigg/Groat Market be demolished entirely, creating a European style open 'square' and opening up a vista to St Nicholas Cathedral. Deemed too costly, it was an opportunity missed. It would transform the area and should be reconsidered in due course.

Use the Tyne as a transport link for passengers/commuters.

Proper bike lanes everywhere! Space for cycling makes a civilized city (we're decades behind!).

I'd like to maintain the beautiful old buildings – this is our heritage and we should be proud of it. There were too many beautiful buildings demolished in the 60s in the name of modernisation. Look at Grainger St as opposed to Pilgrim St roundabout.

We need real protection and monies for enhancement of the city's green infrastructure A strategy is a waste of paper if nothing real actually happens on the ground. There is currently no money for tree replacement /planting!! Imagine this city with no trees.

Newcastle city guides know Newcastle in the same way London taxi drivers know London. They can sell the city, list its assets and achievements better than anyone else. Their role should be expanded, their voices should be heard, their numbers increased.

Make more free spaces and places. Pocket parks that are dynamics, not the current sterile ones. Make it accessible to all the ages – people living in Walker, Scotswood. We don't want a city centre that is purely commercial. Get rid of the 'blue carpet' and create green spaces with seats.

Transport (metro) to Fenham and West.

Install real time information on bus stations and charge less to make buses more accessible for everyone. Also stop parking on Grey Street, widen pavements, buses only.

Keep the green land green. No more houses.

Protect the green areas in the city, build more wherever we can. Don't lose our building heritage, even if that means protecting currently 'unfashionable' buildings. The loss of Trinity Square car park and development was tragic. It was iconic and could have been regenerated and beautiful again

More space for cycling. Grand Hotel built 1902 needs to be protected.

Grey Street is a beautiful street – with Theatre Royal and a number of very nice bars and restaurants which spill out on to the pavement area – bringing vibrancy to the beautiful backdrop of architecture – only spoiled by the cars and traffic. Can it be pedestrianized and made into a social space in the city?

Restore/renovate/conserve The Guildhall. Income maker for council by having it as a wedding venue. Shame such a beautiful building isn't looked after and available to view.

Take back old buildings to their original beauty – removing modernisations. We should be proud of all our amazing architecture. I'm aiming to do just this over the road at No.46 – removing kebab shop and kitchen to reveal the true beauty of a building forgotten.

Brett old buildings – you need to keep reminders of the river's industrial past.

St James' Park is an ugly blot on the landscape and should go!

Great exhibitions and stimulating contributions – thank you. The involvement of communities is vital to the overall success of the Science City Quarter. There are many well informed groups – Benwell, Elswick, Scotswood – who would value being involved in a variety of ways.

Need more things to do in Newcastle. Once you outgrow pubs and clubs there is very little to do, especially at night.

Besse Surtees House and timber properties need to be spruced up and developed as a tourist area.

More cycle paths. Keep Town Moor and Jesmond Dene as they are!

Town Moor is a green desert. Opportunity for greater bio-diversity in the city!

In 20 years time we will look back at these multi-coloured plastic-clad mass accommodation blocks and say 'what the ruddy heck were they thinking?'. In exactly the same way as we do with the concrete blocks of the 1960s. The difference is that in the 60s they were doing it for a reason.

Don't allow any more buildings. We don't need any more people coming to live here.

Stop building on the grassy areas because when we do build it distresses the environment.

We need a vision for a livable city – pedestrian and cycling priority supported by public transport.

Better integration of students in the city – not all accommodation needs to be in the city centre!!

- *Fewer hotels*
- *Better conservation of old buildings, these are our heritage*
- *More recreation spaces that aren't just pubs and clubs.*

Newcastle has plenty of green spaces – just look at the map!! Develop brownfield sites adjacent to the King Edward Bridge and Newcastle Arena. I am a fan of brutalist architecture – protect the construction from 1960s. We need another road bridge across the Tyne. The High Level is not fit for purpose.

Keep all green spaces intact including Town Moor. We are short of green/flowers/trees in Newcastle city.

- *Make cycle paths more visible and more of them.*
- *Pay attention to the skyline. No more large box horrors.*
- *Encourage roof gardens and street trees, species that reflect the seasons.*
- *Brighten up subways.*
- *Open up the Guildhall and have a building heritage trail.*
- *Put in living walls, eg blank brick walls, all over including Eldon Square.*

How about limited house building on the Town Moor to reduce that proposed for the green belt and green spaces. Use the monies to create a trust fund for green infrastructure funding in Newcastle.

Development of roads – we need the A1 south and the A69 to be dualised. Every government proposal (HS2, more opportunities for Scotland), omits the NE. Great exhibition here, great initiative, please carry on.

I love the fact that we have some really nice green spaces (the Town Moor, Heaton Park, Jesmond Dene etc) in the city – we must always protect these. Also we should rebuild the 'Get Carter' car park!

Protect Jesmond Dene and all related Ouseburn area.

Chewing gum off streets!!

Heaton Park, the best!

The Baltic, as it is a magnificent building and would be versatile for a number of uses. Shame about the flats over shadowing it behind.

Keep the wonderful Gosforth Park Nature Reserve but most importantly keep all the associated wildlife corridors: it will be little use as an isolated island in a sea of building.

Protect the green belt – this is our flood plain and insurance against flooding. Who knows, maybe one day we'll need it to grow crops to sustain the city! Once it's built on it's gone and isn't Britain supposed to be this green and pleasant land?

Green areas must be protected at all costs.

Show more of the old architecture ie new building have windows on first floor, same level as the stonework on the old building. Don't hide the architecture of the original city.

Save the Barras Building.

I've chosen the original soup kitchen, incredibly it's needed now more than ever!

I would love to see the building next to the gate – the large art deco one – put to some good public use. It is a grand building that is sadly going to waste.

Protect and enhance Moor Park and the adjacent moor recreation area in conjunction with the Greening Wingrove initiative – see the areas as 'green lungs' for the surrounding built up streets.

Gosforth nature reserve and surrounding green belt – don't let it become an isolated green pocket, the wildlife needs the linked green areas to continue to thrive.

Protect the areas of green belt which you already designated – they the lungs of a city and if one city starts building on it, others will follow. Value those areas which don't directly generate ££.

Money into Byker but don't gentrify.

St Ann's Quay – because I live there!

I miss the 'Get Carter' car park. Something so ugly, but so iconic. What a shame! Fascinating exhibition.

Metro out to Washington. Clean up seagull poo!

Separate cycle lanes which encourage people to cycle in and through the city centre and suburbs. Planting of wildlife friendly areas and allowing grass etc to grow longer on roadside verges.

Develop the derelict land called the 'point'. It has been left barren for a very long time. Gateshead is developing, I hope this area next to the Ochre yards flats does too.

Please protect the green belt from encroachment – surely the numbers of people that would come to live in the proposed developments have been over-estimated.

The social background connected with the brutalism of buildings in Byker makes the place so fascinating. Renew it keeping this background would make it a great place!

- Look after the lovely old buildings in the city centre.
- Move offices back into town.
- Redevelop them into residences for seniors.
- Demolish the 60s buildings especially if unoccupied.
- More green areas and trees in city centre.
- Cycling paths in city centre.

Look after our old buildings before building new ones!

Emphasise the Ouseburn and how it connects to the rest of the valley and Heaton. Landscape the area to highlight the magnificent industrial heritage and not an area for anti-social behaviour.

Green areas must be protected at all costs!

John Lewis, Fenwicks and M&S right next to each other in the best shopping street in the world. Please keep it that way.

I would:

- add more green space to Newcastle city centre. It's too much stone.
- add more cycling routes throughout the city.
- Improve pedestrian/cycling connections between Newcastle and Gateshead.
- Resolve some awkward motorway junctions.

PS. Great exhibition.

Protect the green areas – they are the lungs of the city and its people and are admired by visitors from afar. Serve a great contrast for a fascinating city centre with a great mix of buildings and users. The power of the planner is to say "no".

Ensure that the Newcastle General Hospital site is developed in a way that includes community use – e.g. gardens, green 'trails'.

Protect everything. Newcastle is a national treasure.

Improve provision for cycling in city centre. No cyclists shown on concept drawings.

Better cycle routes from train station to other end of town. No parking on Grey Street.

Too many under-developed plots of land in Newcastle. "Lets claim it and build out".

Reinstate the pedestrian access out of Broad Chare/Stockbridge under the largest railway arch there. This used to be an access to Carliol Square area and is almost as impressive as the arch over Dean Street. But now it just goes into A,B and C House's car park. Shame.

Protect all existing buildings. Do not assume that old buildings must be destroyed to make way for new. Refurbishment is always an option.

Renovate and change use of existing city centre buildings to reflect changing demographic e.g. Former Odeon Cinema becomes mixed social/private housing. Accommodates those wanting to cut carbon footprint by living nearer facilities. Plan ahead imaginatively for different transport initiatives. More walking/cycling/bus and train usage.

Release some green land on the Town Moor for housing in order to reduce pressure on the green belt. It would be more sustainable than building new suburbia.

Protect and enhance the areas around the old town wall remnants. For example, the section behind central station, which is hardly known and in danger of being hidden by new development.

7.14 This feedback was then combined with the baseline evidence and backcasting information to start the process of identifying issues for discussion in the stakeholder workshops and to form the basis of the Delphi surveys.

Photographs from the Newcastle City Futures exhibition

Photo: one of the series of posters and postcards designed to advertise the exhibition and events series
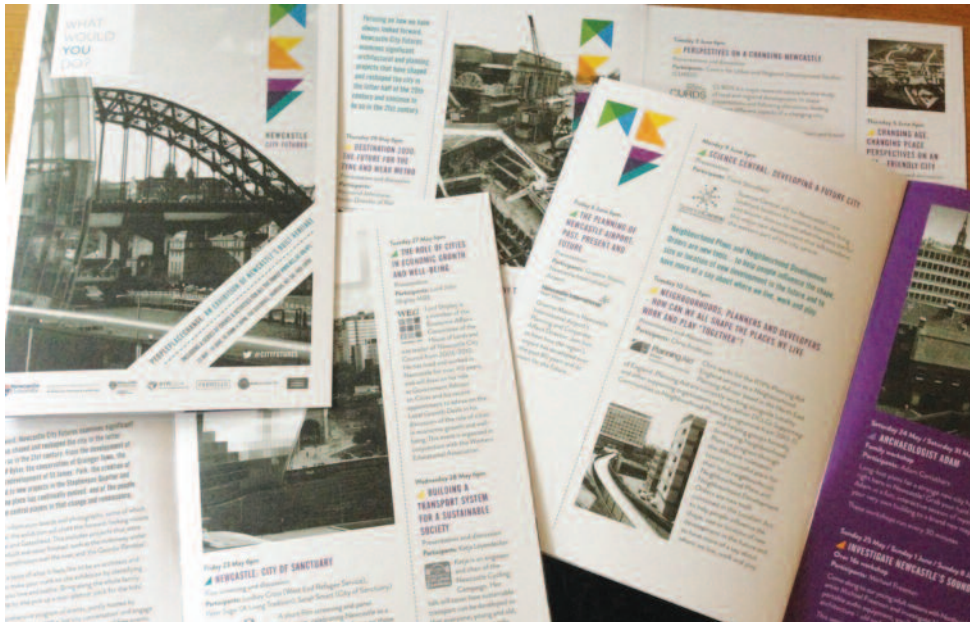
Photo: The NCF exhibition and events brochure, prepared for public dissemination
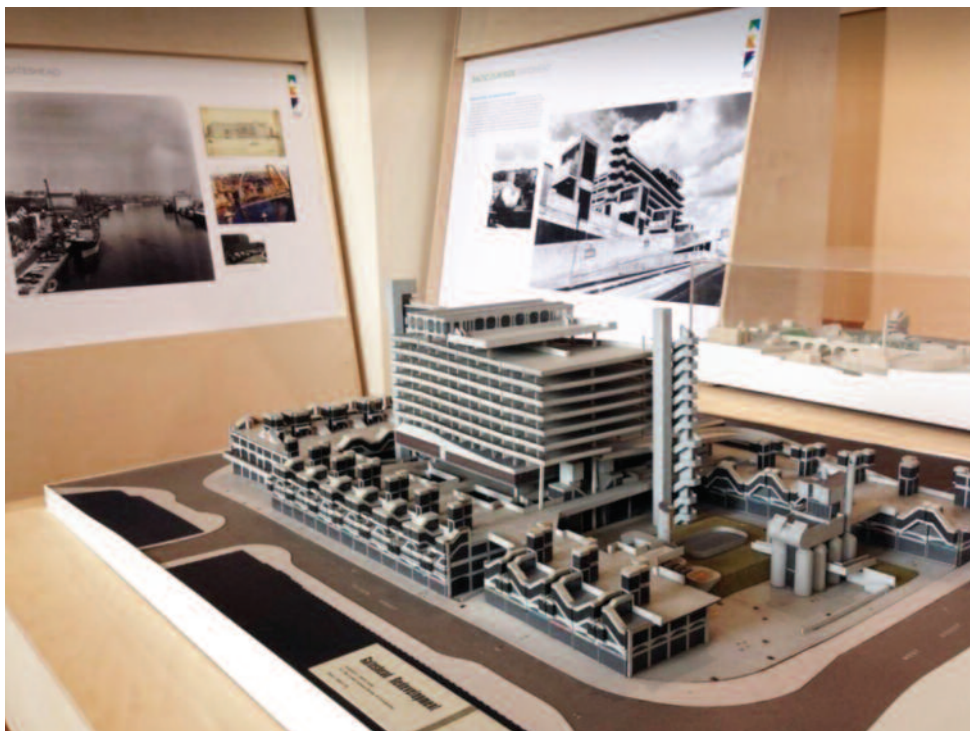
Photo: display material at the exhibition, identifying new projects, past projects, and those unbuilt

Photo: The main exhibition display, featuring models and panels
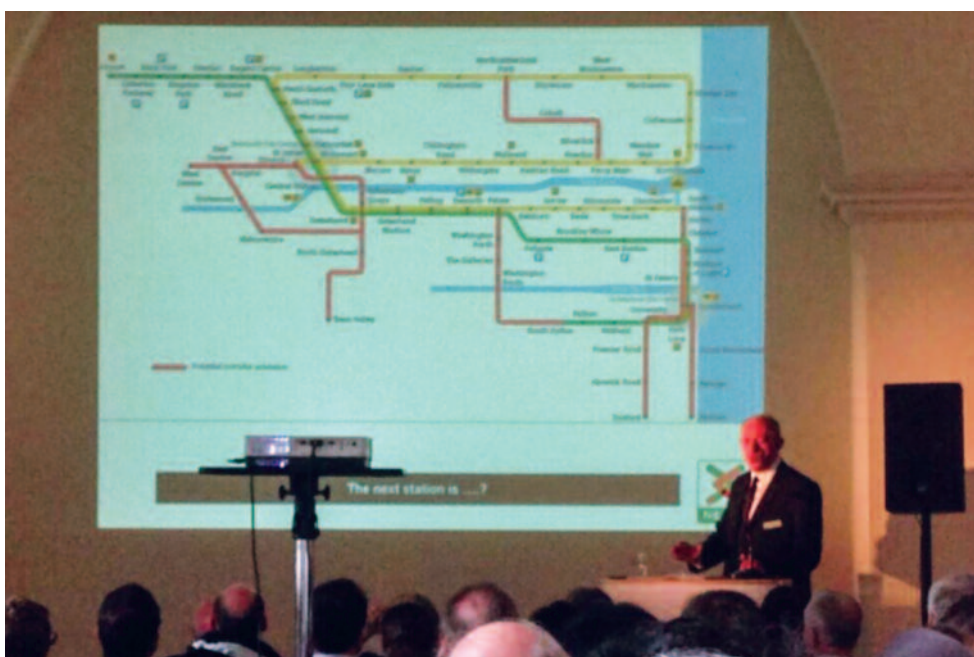
Photo: one of the 22 events held in the exhibition space: Newcastle Metro 2030

07

Photo: one of the 4 x A0 aerial photograph interactive boards, encouraging visitors to identify features in the city they would protect or change.

Photo: the family area in the exhibition, designed for different age groups, encouraging young people to design their own city.

Photo: some of the public feedback postcards at the display

Photo: press interest gathered pace during the course of the exhibition particularly around historic projects. Here, director Mark Tewdwr-Jones poses with the original architect's model of the iconic Gateshead Trinity Square Car Park for a feature in the Newcastle Journal.

Photo: Councillor Nick Forbes, Leader of Newcastle City Council, at the Newcastle City Futures closing ceremony.
Photo credit: Mark Shucksmith.

08

NEWCASTLE CITY REGION RESEARCH AND LITERATURE DATABASE

OVERVIEW

8.1 In parallel to the baseline evidence method and the exhibition feedback, a step was taken to establish a database of existing research, primarily from universities in the region which has as its focus the future of the city and region. There are five universities in the region: Newcastle, Northumbria, Durham, Sunderland and Teesside. At present, there is no easy way for academic researchers or external stakeholders to find out if there is any relevant research for the region stored locally. This often leads to wasted resources and research is repeated or policy developed without the benefit of a searchable database of up to date research. Newcastle-related research may also have been undertaken by academics from outside the region.

8.2 There have been past attempts to collate and collect such research through the North East Regional Research and Information Partnership. (NERIP) Unfortunately, since this was funded through the Regional Development Agency it has now been wound up. However this resource tended to focus on research created by non-academic institutions. The aim of this element of the foresight methodology was to firstly collate existing research into a searchable database and then to establish a protocol whereby new research on the city region can be catalogued within the database as and when it is produced. This protocol would include the collection and possible aggregation of primary data relevant to the region which could then be available for subsequent research.

8.3 The initial search for research was carried out manually through a systematic search of University and other research institutions web pages. Where relevant this was followed up by making contact with key individuals in those research centres to request information on current research, and the research deans in each of the Newcastle University faculties. The second phase of work attempted to understand whether there are ways of capturing this information and the corresponding research outputs automatically through the in-house software of each institution.

Database evidence

8.4 As the saying goes: "knowledge is power". As greater political powers and responsibility are devolved to city regions ('metros') there is a pressing need for those cities to collect, analyse and share data in a systematic way. The growing importance of data was recognised in the recent report by the City Growth Commission (RSA, 2014). In particular, they state: "Metros needs to improve their capacity to collect and analyse data about the economy and public services…. without robust, granular data, metros are effectively planning and commissioning blind" (RSA, 2014: 22). To add to that proposal we would argue that city regions also need rich textual socio-economic research and data to support strategic policy development and foster transparent city regional governance.

8.5 This stream of the Newcastle City Futures 2065 research programme therefore sought to make a start on collecting and sharing that rich and robust granular data badly need by city regional institutions. What has become clear since the start of the Foresight research project is that there is already an abundant resource of research and data pertaining to the North East region but it is largely hidden and difficult to locate. This section of the report will first give a background to existing data sources and attempts to coordinate their dissemination within the region, and then proceed to outline the current sources being covered by the project.

8.6　One of the main coordinators of regional data and research had been the now defunct Regional Development Agency – ONE North East – through its regional information partnership NERIP. NERIP brought together a range of policy and research papers from across the region and commissioned a number of reports themselves. The partnership was wound up following the demise of ONENE; however, a legacy website containing the existing research papers still exists (www.nerip.com). One North East also commissioned a futures perspective study in the mid 2000s, SHINE (Shaping Horizons in the North East), that employed an extensive participatory process including the development of scenarios to inform the development of the Regional Economic Strategy. Following One North East's abolition in 2011, this work was, in effect, lost.

8.7　In terms of future and current data and research pertaining to the city region, it is perhaps best to start by outlining the various sources. A wide variety of organisations and institutions undertake relevant research: universities, local authorities, government-related bodies such as the NHS, think tanks, private companies, and third sector organisations. In addition, there will be city regional elements to national data sets such as the census, Inter-Departmental Business Register or NHS data. Table 1 outlines the types of material available and the potential sources of that data:

Table 1: Sources of regional data

	Raw Data	Policy Papers	Research reports	Peer reviewed papers
Universities				
Local Government				
Regional Governance Institution (i.e. LEPs & CA)				
Other Government				
(i.e. NHS Trusts)				
Private Sector				
Third Sector				
Think Tanks/lobby groups				
Central Government				

8.8　The most obvious sources of research in the city region are universities. Primarily, those within the region would be most relevant but also those universities elsewhere whose focus of research is the region. This will include primary research and secondary analysis of other sources of data such as census data. At the moment there is no systematic method for capturing this wealth of research although the Research Evaluation Framework (REF) Impact Case Studies that are now publicly available could provide a valuable resource to be mined, not least because much research with impact will be built up with local partners.

8.9　A second significant source of regional data and research are the new cross-local authority regional institutions such as the Local Enterprise Partnership and, in the North East, the Combined Authority. These bodies are now tasked with producing strategic plans for the region and, as the RSA report highlights (RSA, 2014), they cannot do this without having a clear picture as to what they are planning for and for whom. Reports such as the North East Strategic Economic Plan are a good example of the type of strategic research that is required to inform regional and city regional strategic policy (NELEP, 2014).

8.10 Local and other governmental bodies are also a significant source of both raw data that can then be analysed by others and of research and analysis on the particular issues affecting them. It needs to be recognised that these bodies are under severe resource constraints and any shared effort to produce better regional data can only be a positive move.

8.11 A significant, but currently underutilised resource in the mainstream is the research and data held by private companies. There are a number of large multinational companies based in the region each of which has significant research capacity. For obvious reasons, a significant proportion of the research may be unavailable to the wider world but large parts of it would be relevant to wider strategic policy debates. Again, a systematic method of collecting and disseminating this data and research is needed.

8.12 The last few regional sources of data and research are third sector organisations and think tanks. The three most obvious examples of these are the Northern Rock Foundation, IPPR North and Centre for Cities. These sources of information contain both primary and secondary data analysis. Collecting research reports from these sources would be relatively straightforward, however it is not clear what other similar resources are in existence.

8.13 The last source of data is perhaps the largest. This is the data collected by central government and associated bodies that can be differentiated at the regional, local or neighbourhood scale. Data sets in this category would be the census, inter-departmental business register and Department for Work and Pensions data sets. Data also exists at the increasingly accessible and searchable neighbourhood statistics website. This data is highly complex and often comes with limitations on its use and manipulation. Having more of this data available in an easy to access format at the city regional level would improve the ability to analyse all the previously mentioned sources of data and research.

8.14 There are two aspects to this resource that could be developed. The first is raw data. There would be massive benefits in maintaining a unified data resource for the city region. The bedrock of this data set would be regional and city regional data extracted from national data sets. This could then be augmented with data from other sources such as universities, local government and regional organisations, and the private sector. It may also be possible to agree a standardised approach to data collection within the city region; this would mean that in addition to satisfying the primary reason for the data collection, more data could be added to that already existing to build up an ever more comprehensive picture of the city region. This standardised approach would also assist in the development of a time series data set thereby allowing trends to be identified.

8.15 The second resource that could be collected and disseminated is the various reports, briefing papers and academic papers that have the city region as their focus. Given the availability of social media this could take the form of a wiki or open source library. Provided awareness of the repository is developed at the outset, the updating and managing of the resource should be fairly minimal.

8.16 Both these approaches require a degree of pump priming and resource allocation to initiate them and thereafter a strong commitment to maintain collaboration across agencies. A key issue here is the need for transparency and the ethics and legality associated with the collection and holding of data, even in an amalgamated form. Once databases are established, they should be self-sustaining.

8.17 At the moment, the research team have collected around 50 research papers from the partner organisations involved in the Newcastle City Futures 2065 project. The papers range from the Northern Rock Foundation's Third Sector Trends report 2014 to Hitachi's Smart Cities report; the collection includes various research reports from the universities such as a report on the region's rural enterprise hubs from Newcastle University's Centre for Rural Economy. A start has also been made to catalogue a further 100 research papers still hosted on the NERIP website but this task requires additional support and resources that are currently beyond the scope of the Foresight project.

8.18 This task does not ignore, additionally, the vast amount of material captured as part of the ongoing functioning of the city, captured and stored in the Cloud – the so called 'big data' and the subject of considerable exploration under the umbrella of smart city initiatives frequently led by global information businesses such as IBM and Cisco.

8.19 The findings of university research projects that are devoted to subjects of relevance to Newcastle and the North East are not captured in a systematic way for dissemination back to organisations within the city. There is a clear opportunity here to rethink methods to both collate and disseminate relevant research material – intelligence, data and outputs – that may be of significance for the future of the metropolitan area.

8.20 In the last 12 months alone, Newcastle University has won a significant amount of research funding on a range of issues that have a Newcastle or North East focus (see Table 2 below). This work will be of use to individuals beyond the university.

8.21 In addition to outlining the contribution of research to the city, the projects illustrate the varied research subject matters that are of potential interest to business, policy and user communities.

08

Table 2. Select research funded projects won by Newcastle University June 2014 to May 2015 with relevance to Newcastle

Project	Approx. value	Disciplinary field
Digital Civics	£4,000,000	Computing, digital, planning, education, participation
Centre for Digital Economies	£5,000,000	Computing, digital, planning, economic growth, technology
National Health Service Alliance, Connected Health Cities	Share of £20,000,000	Health and social care, big data
National Institute for Ageing Science & Innovation	£20,000,000	Ageing, business, economic growth, technology
InnoLife, demographic change, ageing	Share of EUR2,100,000	Ageing, technology, social care
Urban Science Building, Science Central	£58,000,000	Computing, digital, technology
Neptune Centre for Excellence, subsea cluster	£10,000,000	Subsea engineering, technology, economic growth
Cloud Innovation Centre	£1,000,000	Computing, business, economic growth
Smart Grid Laboratory	£2,000,000	Energy, housing, business, technology
Compass4D, DriveLab, automated transport systems	Share of EUR10,000,000	Digital, technological, transport
Urban Water Infrastructure facility	£10,000,000	Infrastructure, sustainability, flooding, economic growth
Policing Research Partnership	£6,686,000	Policing, social policy
Alcohol and young people, city spaces	<£50,000	Social policy, planning
Impact of the Bedroom Tax	<£50,000	Welfare, social policy, housing

Note: table is not an exhaustive list of all projects underway with a Newcastle interest but is indicative. List excludes work undertaken at other universities and unfunded research work.

09

STAKEHOLDER
WORKSHOPS

9.1 Alongside the baseline evidence and the feedback received from members of the public at the city futures exhibition, it was decided to gather opinions from representatives of governmental, professional and business organisations in Tyneside. An initial series of workshops was held in December 2013 in Newcastle when Sir Mark Walport, the Government Chief Scientist, with officials from the Government Office for Science team, visited as part of a fact-finding session. The first Newcastle Foresight stakeholder workshop took place in May 2014 with 12 people attending, representing the public, private, voluntary and academic sectors (see Appendices for a list of attendees). The aim of the workshop was to get an understanding of the current opportunities and challenges facing the city region and start to develop a conversation to focus in on some of the key themes that would inform the development of future scenarios later in the project.

9.2 Following a series of presentations and conversations across the workshop day, two broad themes emerged from the discussions. These could be summarised as follows:

- The future of the city region; and
- Future cities.

9.3 The future of the city region theme was considered to be more of a social and economic question, with the future cities theme was considered to relate more to the technological and infrastructure potential of the urban area.

9.4 A number of issues facing the city region at the present time, were highlighted by the participants:

- Positioning Newcastle city region within national, European and global networks
- Overcoming a lack of entrepreneurialism
- Enhancing skills development and retaining graduates
- Promoting the city positively within the rest of UK and in the UK Government
- Confronting media stereotypes of the city and residents
- Capitalising on more than one regional identity: a cultural region, an economic region or a tourist region. Not all overlap completely

9.5 From these challenges, a set of key questions (labelled 'dilemmas') were produced:

- What is the optimal size of the city region, what and where are its boundaries?
- How can we benchmark the cultural/economic league position of Newcastle?
- How to transform small and medium enterprise (SME)? The region is good at new business start-ups but less successful at growing them to the next level
- How to make the region more 'sticky' in terms of research, business supply chains, graduates etc?
- Where will the leadership to deliver the 2065 vision come from? There is currently a fragmented series of groupings of 'visionaries' across the region seeking to undertake strategic thinking for the future.

9.6 It was also recognised that the city region already possessed significant social, economic, cultural and natural assets but these were not always celebrated within the region. These include:

- Strong regional identity
- Excellent connectivity (physical)
- Stable political environment
- Resilience
- Social connectivity
- International profile
- Engaged and 'warm' citizens, a friendly city
- Solid public transport base
- Fantastic natural resources
- Good quality of life compared to some other regions
- Young urban profile thanks to student population
- Manufacturing inherent 'in the DNA' of the region
- Strong academies, with the region 'punching above its weight' in terms of the number and range of higher education and further education institutions
- Significant culture/arts offer
- Compact city with dense networks and internal connectivity.

9.7 Participants were asked to try to address these challenges and find solutions. The following agendas were identified:

- Symbiotic budgets (i.e. budgets from different policy/institutional areas being pooled to tackle specific issues on a holistic basis).
- Shared human resources across organisations.
- A cultural change in career progression and acceptance and harnessing of 'grey knowledge'.
- Development of a network of networks, both physical and virtual.
- A commitment to a green economy in the North East and determination to sell it to world.
  – Establish a demonstrator region – manufacturing and rolling out electric vehicles; Create smarter cities and smart grids – all of which requires joined-up networks to operate successfully.
  – Expectation that multinational businesses in the region could do more to promote the future city, with prospect of linkages to funding to pilot innovation.
- Actioning the age friendly city with awareness of changing demographics in the city, establishing and developing roots of an innovative age friendly city within the region.
- Developing a testbed for a regional hydrogen economy through:
  – A transport/housing/smart grid;
  – Modifying skills to adapt.
- An inclusive city region engaging civil society and ensuring citizens have opportunities to take part in the conversation
  – Engaging communities in decision making and policy making through innovative methods.
- Fostering partnerships between universities, industry, and the third sector.

9.8 The final part of the workshop encouraged participants to sketch out a possible vision for the Newcastle city region up to 2065. This was not meant to be a comprehensive task but one that gave shape to the issues identified during the course of the day. The following themes were agreed as the components of any vision for the future of Newcastle:

- A skilled labour force to meet needs
- Legitimised parallel routes through education to training and employment
- An excellent public urban space, accessible to all
- An attractive, popular city, a first choice destination and location
- The city is a sum of its parts
- A confident, positive city
- An urban area that possesses excellent infrastructure links
- A city that promotes a future city commitment
- A city region with equal access to sustainable housing and integrated public transport
- A place that has varied and new educational models and customised training programmes.

9.9 Follow a review of the knowledge produced during the stakeholder workshop, a set of 15 key themes were produced:

Education and Skills	Technology
Health and ageing	Public transport
The built environment of the city region	Other infrastructure
The natural environment of the city region	Housing
The social networks within the city region	Cultural Institutions and assets
The national and international institutional and political networks	Newcastle city region's place in the UK/world
The governance structures within the region	Climate change
The economy of the city region	

9.10 The findings from the workshop were integrated into the analysis gathered from the other methods and used to shape the development of a Delphi survey for distribution to a wide range of organisations in the city region. This work is set out in the following chapter.

Participants at one of the stakeholder workshops

10

THE DELPHI SURVEYS

10.1 The Delphi Survey was chosen to develop a deeper understanding of the themes generated by the stakeholder workshop (as discussed in the preceding chapter). The Delphi Method was developed in the 1950s by the RAND Corporation to avoid the problems associated with group thinking, group bias and pressure to conform to the majority views of the group. In its original form it was designed to inform future thinking and war-gaming in relation to the Cold War. The main benefit of the Delphi Technique is its ability to obtain a consensus of opinion among the experts involved in a project. Since its original development, it has been adapted to suit a wide range of research problems.

10.2 There are a number of characteristics of the Delphi Method that are common to all projects:
- There is anonymity on the part of the participants;
- The participants are chosen because of their specialist knowledge of the subject matter; and
- There are at least three rounds of communication between the researcher and the participants.

10.3 The final set of responses are collated and interpreted to give an overall – and hopefully complete – understanding of the policy arguments and underlying basis for the positions taken by the experts.

10.4 The Delphi Method therefore offers the ideal methodology for seeking a consensus view of the participants. In this instance, it was possible to conduct the survey online and this had an additional benefit of being flexible at a time in the year (summer 2014 initially) when there were numerous other pressure on people's time.

10.5 The survey had three objectives:
1. To establish the relative importance of the themes identified in the stakeholder workshop:
2. To explore the relationship between the themes. This would involve mapping the nature and intensity of the relationships; and
3. To identify any missing themes for inclusion in the development of scenarios later in the project.

10.6 In total, there were 20 valid responses from a sample size of 74, representing a 27 per cent response rate.

Delphi Round 1 results

10.7 The first question asked the respondents to state how important each theme was to the future of Newcastle city region. Figure 1 shows the 15 themes in order of importance; the most important identified was 'Education and Skills', the least important was 'Climate Change'.

Figure 1 – Theme Importance
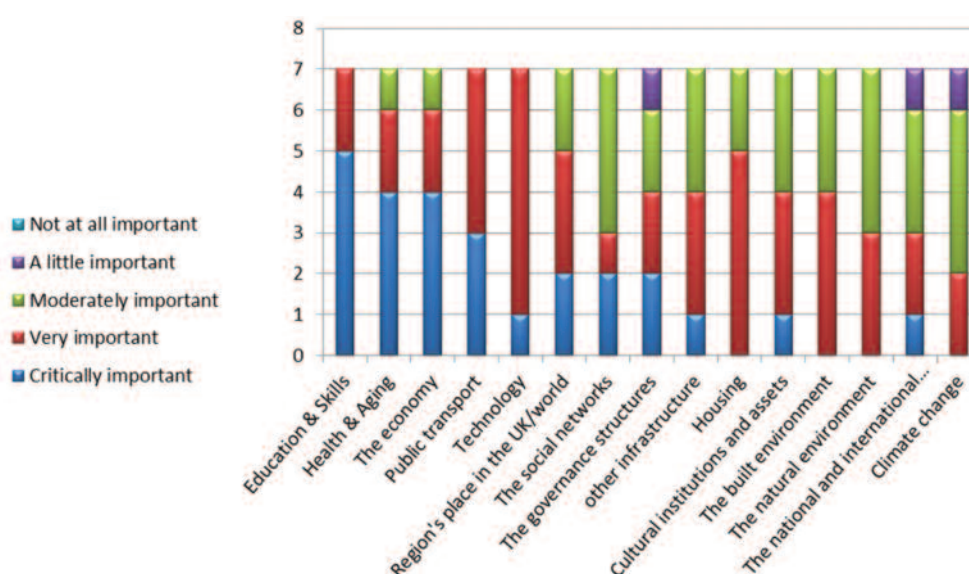
10.8 The second question sought to understand the strength and nature of the relationships between each of the themes. In figure two, the size of the arrow relates to the strength of the relationship identified. The direction of the arrow shows which other theme is relevant to the theme under consideration. The blue arrows indicate reciprocal relationships; for example, respondents stated that 'Education & Skills' was important to the 'Economy' and, in turn, stated that the 'Economy' was important to 'Education & Skills'. Other arrows show one-way relationships, i.e. many themes were relevant to 'Climate Change' but 'Climate Change' was only relevant to the 'Natural Environment'.

10.9 In summary:

- 'Education & Skills' and the 'NE Economy' are over-arching themes and relate to many of the other themes and vice versa;

- There are a number of secondary themes: 'Public Transport', 'Social Networks', 'Housing', 'Cultural Institutions', 'Governance Structures' and 'Built Environment' which are influenced and are an influence on a range of other themes;

- There are tertiary themes: 'Other Infrastructure', 'Health & Aging', 'Newcastle's Place in UK/World', 'National & International Networks', 'Climate Change' and 'Natural Environment', all of which are only relevant to one or two other themes or else not relevant to any other themes.

Figure 2 – Theme connections
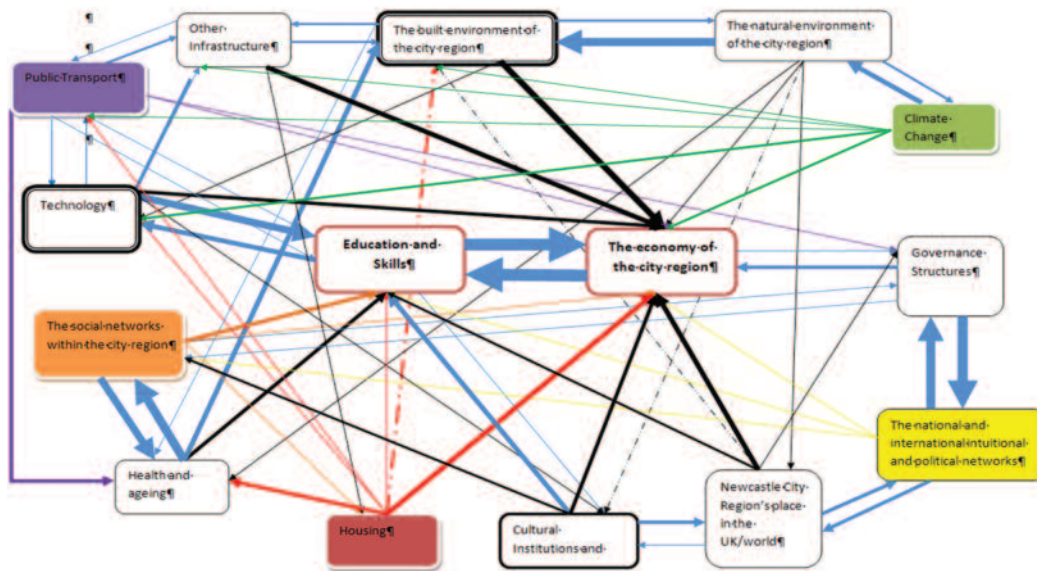
10.10 The Lead Expert Group were then contacted with the results of the Delphi Survey and asked to suggest themes which are important to the future of the city region but which were discussed during the first stakeholder workshop. The results are set out below:

Theme	Response
Social mobility and equality	Areas of disadvantage, health inequalities, inter-generational unemployment, educational attainment.
Charity/Third Sector	The work of charities cuts across many of the themes listed either as a direct deliverer, as a contractor or by providing support to other institutions both public and private. They provide support networks, take over the running of community assets and generally work to make people's lives better and make the area a better place to live. They can act as a check on private and public sectors plans and give voice to sections of society often overlooked by more traditional routes.
Voice and influence of children and young people	Because they are the future and they need to see a future for themselves in this region. The UK as a whole is a signatory to the UN Convention on the Rights of the Child which includes all government institutions. Education is not just something that is 'done' to children and young people, they should be active participants in it and it should be responsive to their wishes and feelings.
High levels of ambition and aspiration	Greater confidence about the future of the City particularly amongst young people is critical to the future success of Newcastle. Aiming higher and seeing great personal prospects is key especially for local residents.This has to be linked to an outward looking international outlook wherever possible.
Arts, innovation and creativity	These are critical in generating and sustaining symbolic, cultural, social and economic capital.
Community engagement	We are seeing increasing inequalities and unless there are positive attempts to involve ALL residents, we could end up increasing inequalities further
Other transport	Whilst public transport is vital to the region as a whole, other transport networks i.e strategic roads, local roads and pathways are vital. More than 95% of the population use the road network at some point of their day either driving, walking, cycling, bus etc. Without investment and improving the networks already in place, we cannot deal with future and current demands to keep the region's population and economy moving.
The national and international institutional and political networks	Education and skills are the cornerstone of economic success for individuals organisations and geographic areas.
Regional identity	Tyne and Wear has a powerful reputation as an industrious region with a significant identity based around the historical reputation that 'being a 'Geordie' brings. As an 'incomer' to the locality 35 years ago I have always been aware and conscious that this is a distinct advantage that separates the NE from other UK regions that could be exploited.
Integration of the above	Unless we follow the model of exemplar cities and integrate all our assets and plans we will have isolated examples of excellence which will be diminished by a lack of integration.

Theme	Response
Sustainability	I feel that further research to enable the continued development of Newcastle as a sustainable city region will provide an underpinning theme to many of the above. It will direct the way in which we operate and like cultural assets and institutions, sustainability will shape our ethos and values.
The society of the city region	While social 'networks' are noted, I would have used a form of words that more explicitly recognises the importance of the wider societal context. This both highlights the crucial link between economic, social and environmental actions and the challenges of increasing inequality and its impact on people's lives. It's also an area where the city is making a number of impressive interventions, e.g. The Fairness Commission and the Living Wage Commission.
Innovation and small business	I know this might be thought of as a sub-theme within Economy, but the generation of high-value small businesses is at the nexus of Education, Technology and Economy. Already the region has an ecosystem of small businesses in IT, information and web services, that is probably rather more active than many had thought. The nature of such businesses is such that they rarely find representation at civic level (they're not into joining chambers of commerce etc.). However, they are talent-based attractors of bigger businesses. We need to look into ways of supporting such businesses and raising the ecosystem's profile across the UK.
Inequality and poverty	We need to understand whether we are on a trajectory for a more "two tier" city, with economic opportunities being exploited by those with the skills and networks to exploit them, but with continued poverty for a large proportion of our communities, concentrated in specific parts of the city. A future economy which creates increasing economic, health and social inequality will prove unsustainable over the long-term, and the City Futures project should consider the social consequences of different economic futures which fail to deliver greater prosperity for those in the currently most disadvantaged groups.

10.11   These results were added to the analysis and used as a platform to discuss the scenarios.

11

SCENARIO BUILDING

11.1 The Delphi Method and scenario development method are closely connected. Through a thorough understanding of the drivers of change in cities and the context through which the drivers take effect, it is possible to produce a number of scenarios for a city and its regional hinterland. The Delphi Method analysis, outlined in the previous chapter, sought to highlight the critical drivers of change and areas of uncertainty. These could then inform the production of scenarios that investigate the range of decisions that could be made about the future development of the city.

11.2 Scenarios are not intended to be predictions about the future but provide a prompt for discussion about the choices and decisions that would need to be made to generate ideas or visions of the future for a specific place and, simultaneously, avoid unpalatable future outcomes.

11.3 The project team developed three scenarios primarily using the information gathered through the Delphi Survey and the stakeholder workshop but also incorporating the material produced by the national foresight project in areas such as demographics and employment. The stakeholder workshop generated the key themes which stakeholders agreed would drive the future of the city. The key themes were then tested with a wider stakeholder group using the Delphi Method. As can be seen from the previous chapter the key themes were validated by stakeholders. The Delphi Survey also gave an insight into their relative importance and the relationship between individual themes. The results of the Delphi Survey offered a valuable understanding of the city's priorities when developing the scenarios.

11.4 A four stage process was undertaken to develop the scenarios:
- Step 1. The first step in creating the scenarios was to consider what the significant societal changes would be for the future. This was done using insights from previous Foresight Projects such as Land Use Futures (GOS, 2010) and information provided in the reports commissioned by the national Future of Cities Foresight project. This provided an understanding of the potential impact of large scale societal change. However this needed to be related to Newcastle and its regional hinterland. In each situation therefore the question was asked: what does this mean for the whole of the Newcastle area?

- Step 2. Building on information gathered in step 1 it was possible to construct a series of narratives which paint a picture of how the wider societal change would affect the city. These stories highlight key milestones on the way to the envisioned future and potential pitfalls.

- Step 3. The third stage in the process was to develop a detail matrix of specific goals and ambitions which can be used to inform debate and policy within the city. To construct the matrices the key themes were then placed in order of priority as rows with the columns comprised of the STEEPV headings. STEEPV is an acronym standing for: Society; Technology; Economy; Environment; Politics; and Values. The STEEPV method is a useful way of structuring ideas and thoughts. The combination of the key themes and the STEEPV categories provided a powerful framework on which to construct the scenarios.

- Step 4. The final stage involved reflecting on the narratives and matrix content, and modifying activities for presentation.

11.5 The scenarios were prepared by the core research team at Newcastle University in collaboration with a number of key stakeholders. In particular, the work drew on the outcome of the stakeholder workshop (outlined in chapter nine) that had identified the following issues as relevant in shaping the future of Newcastle and Tyneside:

Education and Skills

Health and ageing

The built environment of the city region

The natural environment of the city region

The social networks within the city region

The national and international institutional and political networks

The governance structures within the region

The economy of the city region

Technology

Public transport

Other infrastructure

Housing

Cultural Institutions and assets

Newcastle city region's place in the UK/world

Climate change

11.6 The issues identified in the Delphi surveys (chapter ten) were also integrated into the scenario work. These themes covered: Education & Skills, the NE Economy, Public Transport, Social Networks, Housing, Cultural Institutions, Governance Structures, Built Environment, Health & Ageing, Newcastle's Place in the UK/World, National & International Networks, Climate Change, and Natural Environment.

11.7 There are three scenarios, each intended to construct an alternative narrative of the development of Newcastle over the next 50 years to 2065:

- *Continuation of present socio-economic trends* portrays a city that develops in much the same way as it exists at present. The city is affected by global and national decisions taken elsewhere, and where intra-regional politics is often conflict-ridden leading to ongoing uncertainty for businesses and citizens. The economy struggles to compete with London's continued domination. Newcastle's geographical position, too far from the Northern Powerhouse focused on Manchester and the Central Belt of Scotland, becomes a disadvantage.

- *London implodes* as it is unable to cope with demographic and environmental pressure: rebalancing the national economy portrays Newcastle as a confident place that has recognized its assets, generates a successful economic transition, and has implemented a range of infrastructure projects to boost its presence internationally and nationally. The city's quality of life leads to a rush of development activities, a programme of urban renewal, and a thriving arts and cultural scene. Although successful, the city also has to deal with a property bubble and increasing unaffordability for citizens.

- *Newcastle finds its niche as a test-bed city* portrays the city and demonstrator platform for a range of scientific and technological future-facing public/private projects and programmes that are socially inclusive. The city has developed confidently, and opens up strong relationships with northern Europe. The city becomes a test bed for an engineering powerhouse with the result that Newcastle achieves international prominence as a forward thinking science city. Social and cultural developments and consumer services support this platform role.

Scenario 1: Continuation of present socio-economic trends

Context

Politics and governance

The UK has opted out of the European Union following a referendum in 2017. The impact on economic growth has been felt acutely in the North East. The decision by Nissan to relocate its car assembly plant from Sunderland to the European continent has affected supply chains in the North East and caused the decline of some services in some centres.

Westminster has taken a decision to 'move' the Houses of Parliament around the UK throughout the 2020s so that the Palace of Westminster can be renovated. The House of Commons and House of Lords sit on Tyneside for the parliamentary year 2023, and the State opening brings some much needed lift in people's spirits with celebration and pageantry in the region.

The continual contestation over awarding additional powers to Scotland, in the wake of the fairing of the main political parties south of the border, results in a simultaneous push for devolution to English cities in the period from 2015 into the early 2020s.

The Government has decided to implement an asymmetrical approach to devolution for the English core city regions with Manchester, Leeds and Birmingham at different stages of implementing new processes. The case for Newcastle was made by 2016 but has been complicated by differences between the Combined Authority and local community agendas.

In the meantime, local council services barely exist in the way that would have seemed imaginable in 2010. The local taxation base remains fragile and successive Governments in Westminster have further squeezed local government finances to the point that additional cuts are being required.

Economy

London and the South East continue to dominate the national economy sucking in people and businesses. It is increasingly difficult to retain a skilled workforce in the region with more than 65% of graduates from the regional universities migrating away on completion of their education. The political uncertainty in the run up to the UK's withdrawal from Europe stalls overseas investment in the region.

Manchester and Leeds develop rapidly through infrastructure provision and economic growth but progress is slower in Newcastle.

Major businesses such as Nissan, Siemens and Hitachi, scale down or close their operations following the loss of access to the EU. The region struggles to escape its reliance on unskilled low pay employment and low productivity. There are large pockets of 'NEETs' within the region which causes long term problems in increasing employment levels.

The rural hinterland is constantly at a disadvantage to the rest of the country, even other rural areas, in terms of connectivity. This hampers diversification away from traditional rural business sectors.

The agricultural sector takes decades to recover from the loss of agricultural subsidies and lack of access to EU markets following the UK's withdrawal from the EU. This lack of certainty about the future results in low levels of investment and development. Rural areas become polarised between wealthy enclaves in attractive rural areas, protected areas and a remainder of less well-off communities.

Infrastructure

The focus for London and Edinburgh governments is on developing high speed rail northwards from Manchester and Liverpool to Glasgow and Edinburgh via the west coast.

The new East Coast rail franchise implemented in 2035 is the last to require through Edinburgh to London Intercity services on the East Coast. In the 2040s, Intercity services to London will start and terminate at Newcastle. A slower stopping service is implemented for Newcastle to Edinburgh trains.

The HS3 line from Liverpool and Manchester to York and Newcastle across the Pennines is implemented in the 2020s. It does reduce journey times but not significantly and the economic benefits of a new connection to Leeds and Manchester have yet to materialise in a substantive way.

There is no consensus on extending the Tyne and Wear Metro through the opening of new lines even though Whitehall is willing to consider part funding. The existing passenger rolling stock is earmarked for replacement but not until 2040; reliability of the trains declines and service reliability suffers.

The port at North Shields is affected by Nissan's decision to relocate away from the North East. The passenger service to Amsterdam is maintained but under threat of withdrawal.

Demography, Growth and Urban Patterns

Pressure for new housing in parts of the region area remains acute owing to natural increases of population, increases in the numbers of households, and intra-regional migration. Some new housing estates are built but are marketed as a lifestyle choice, they are beyond the means of most local people, and are gated communities. Affordable housing is in limited supply, although property prices are cheaper than those for London and Manchester.

The number of graduates from North East universities migrating out of the region continues to grow, despite attempts within the region to retain the skills base. The choice locations for graduates are now Manchester and Leeds.

Northern cities have progressed economically but the success of Manchester and, to a lesser extent Leeds, means that they develop at the expense of some other northern cities. As a result there is small increase in commuting from Newcastle to Leeds and Manchester by skilled manual workers and professionals.

Parts of certain urban areas in the North East decline rapidly, with the onset of significant social problems.

A growing number of Newcastle's elderly population are active and play a role in both the local economy and socially, and assist those most vulnerable. Changes to improve the built environment and physical fabric of the city to accommodate the needs of an ageing society are rolled out incrementally.

New redevelopment projects for Newcastle city centre are abandoned pending a change in fortunes for the regional economy. Some major retailers exit the city, with calls to find new users for empty shops.

Newcastle's Grey Street, Dean Street and the Side are all pedestrianized but lack vitality following the closure of some businesses.

Leisure, Recreation, Culture and Well Being

Arts and culture projects in creative hubs thrive but in an uncoordinated way, with artists and SMEs occupying some vacant premises.

The number of Newcastle residents using bicycles has increased as an alternative and cheap form of urban transport. Cycle hire and cycle park schemes are rolled out across the city.

Consumption of cheap unhealthy foodstuffs contributes to obesity rates and a rise in chronic diseases. Walking routes are created across the urban area with voluntary organisations pioneering 'urbaneering' for young people, families and the elderly.

Scenario 1: Continuation of present socio-economic trends 1/4

	Social	Technological	Economic	Environmental	Political	Values (Culture)
Overall picture	Minimal population increase Out migration of the young and well educated results in a 'hollowed out' demographic.	Limited technological development. Following rather than leading in most areas of development.	Still plagued by low employment, low productivity and little value added in the region Still over reliance on public sector and branch-plant type jobs.	Once the regions greatest asset, over development and climate change have caused significant degradation.	Significant delays in gaining devolved powers put region at a disadvantage and results in fracturing or regional governance bodies.	The strong regional culture tips over into a siege mentality that is anti-all new things. Greater Scottish devolution returns NE to a peripheral, outsider region.
Education & Skills	Certain urban areas in the North East decline rapidly, with high youth unemployment, alcohol and drug addiction, and escalating crime rates. The police are accused of giving up on some areas		Student numbers have plateaued out following the noticeable drop in overseas applicants.		The universities in the region play an increasing role in public service provision	The number of graduates from North East universities migrating out of the region continues to grow, despite attempts within the region to retain the skills base. The choice locations for graduates are now Manchester and Leeds.
Health & Ageing	Mental health issues, anxiety and depression affect a significant number of Newcastle's population. Middle aged professional people are increasingly looked on to support financially vulnerable elderly relatives.	Widespread criticism of the degree to which owners of mobility vehicles in Newcastle come into direct conflict with other road users. The police warn against 'Grey Rage'.	A growing number of Newcastle's elderly population are active and play a role in both the local economy and socially, and assist those most vulnerable		Politics dominated by 'Grey Vote'	Inter-generational conflict. Older population is wealthier with young left behind.

Scenario 1: Continuation of present socio-economic trends 2/4

	Social	Technological	Economic	Environmental	Political	Values (Culture)
The economy of the region	The region is still dependent on public sector and inward-investment. Few business start-ups and low productivity growth	Only a small number of KIBs in region. Lack of critical mass of businesses in key sectors.	Poor business infrastructure, lack of access to markets and financial and business support.	Significant levels of congestion in the region also holding back the economy.	Some divisions between Local Authorities in the region. Much economic development founded on 'beggar-they-neighbour' tactics to attract FDI.	Region viewed as lacking innovation, an enterprise spirit, with few investments occurring.
Public transport	Some token attempts to achieve an integrated public transport system but the car still dominates.	HS2 between Leeds & London by 2035, through trains to Newcastle. No political commitment to extend high speed services to Tyneside.	New office and logistic developments at the airport remain unlet.	Car dependency still high and with a lack of investment in public transport region has highest CO2 emissions in the country.	Conflict between the Combined Authority and some communities: CA decides not to press ahead with Blyth/Ashington rail	
Technology		The one jewel in the North East's economic crown is the development of autonomous vehicles and electric vehicles	The region risks being left behind as it does not have either public or private resources to invest in new technologies.		Local Government retains responsibility for parking and waste with heavy reliance on central government grant income.	
Newcastle City Regions place	There is some increase in commuting from Newcastle to Leeds and Manchester by skilled workforce and professional employees.					

Scenario 1: Continuation of present socio-economic trends 3/4

	Social	Technological	Economic	Environmental	Political	Values (Culture)
The social networks within the region	But many families remain in dire economic and social conditions.				By the early 2030s, the community and voluntary sectors have been at the forefront of shaping local public services, helped in no small measure by a Tyneside spirit and commitment to 'carry on'.	
other infrastructure	Rural areas in NE remain 10 years behind rest of UK in terms of broadband and mobile connectivity		Lack of connectivity acts as major barrier to growth for all rural businesses	Necessity to create growth in region, particularly in 'green energy' has a major impact on the region.	As devolution settlement to Scotland, Air Passenger Duty is abolished north of the border; Newcastle Airport loses out to Scottish airports	
Housing	Pressure for new housing in the city region area remains acute owing to population increases and intra-regional migration. Some new housing estates are built but are marketed as a lifestyle choice, and are gated communities.	A significant proportion of the regions housing stock still fall well below required standard. Implications for health and wellbeing of region	Affordable housing remains beyond the means of many families, although property prices are cheaper than those for London and Manchester.	Poor quality of buildings increases environmental burden. Growing calls by rest of UK and Europe to impose financial penalties on region to require the improvement of stock.		

Scenario 1: Continuation of present socio-economic trends 4/4

	Social	Technological	Economic	Environmental	Political	Values (Culture)
Cultural institutions	Arts and culture projects thrive but in an uncoordinated way, with artists occupying vacant premises.		Connections between culture and creative SMEs fail to develop to boost economic activity.		Lack of political will to engage in culture of region. No longer part of local government remit.	Many cultural activities now seen as elitist pursuits. Lack of public investment has closed many accessible cultural institutions.
The built environment	Changes to improve the built environment and physical fabric of the city to accommodate the needs of an ageing society are rolled out incrementally;		New redevelopment projects for Newcastle city centre are abandoned pending a change in fortunes for the regional economy. Some major retailers exit the city, shop reuse	A widening disconnect between hard engineering approaches to climate change and more holistic land use planning approaches.	Some politicians block 'ageing city' schemes for fear of creating what local newspapers label a 'Geordie Geriatrica', a city that is seen to be only for the over 70s.	
The natural environment	Increased pressure on Greenbelt as population growth drives development	Further intensification of farming and other land based industry puts greater pressure on natural ecosystems	Conservation and bio-diversity are side-lined in favour of production (agricultural & industrial) and development.	Lack of resilience in region results in significant degradation of the environment as a result of climate change: upland moorland fires, flood events etc	Lack of political will to champion environmental protection.	
The national and international institutional and political networks					Identity and economic growth differentials between different parts of Tyneside result in the expression of contrasting political voices in the region.	

Scenario 2: London implodes: rebalancing the national economy

Context

Politics and governance

Rising sea levels and extreme weather conditions cause major flooding in London beyond the scope of protection schemes; an environmentally-driven influx of migrants to London from southern Europe and the global south that the city can no longer accommodate leads to the introduction of policies to redistribute population and economic growth to northern England.

Scotland becomes an independent state in the 2020s. Tyneside is designated as a peripheral region in EU terms with Newcastle designated as a European Gateway City.

An English Parliament is also created and is located in Manchester which further enhances the economic powerhouse of the city.

Devolution occurs for the North East Combined Authority. It is a faltering process. Factionalism within and between leaders in the Combined Authority and some communities occurs on and off over a number of years.

Newcastle civic centre remains the focus for governing the city but new uses are promoted in the building, opening up the space to other organisations and purposes.

The remaining council services are run from satellite community or voluntary sector hubs in neighbourhoods, with libraries, police stations, post offices, community centres, youth clubs, colleges and universities all designated as local community service centres. Surgeries are held weekly for residents to interact face to face with elected representatives.

Newcastle leads the way nationally in forming a new constitutional settlement between the city council/Combined Authority and residents over rights, access to services, ownership of utilities, the provision of information, transparency and accountability.

Economics

By the 2030s there is a rebalancing of the economy away from financial services to manufacturing and agricultural production. The region successfully negotiates a transition to a balanced economy founded on manufacturing and agriculture but with a healthy support system of other business such as engineering, life sciences and digital creative SMEs.

The region has created world leading business clusters in advanced rail, Electric Vehicles, biomedical therapies and sub-sea engineering. The region's universities are well attuned to the region's needs and more than 65% of university graduates stay on in the region.

The creation of a Regional Investment Bank has also resulted in an ethos of long term investment within the region. This critical mass of business infrastructure also helps foster a much more entrepreneurial society.

Many small and medium size businesses have grown up to support the major businesses in the region. The status of Gateway City has also improved connectivity to major world markets.

The rural economy is supported by a network of enterprise hubs which offer knowledge intensive businesses the opportunity to locate in the rural parts of the region but remain plugged in to the critical networks necessary for their growth. Agriculture and primary production is thriving as the region's natural resources, in particular access to an abundant water supply from Kielder, has meant the region has avoided one of the major impacts of climate change.

Newcastle develops as a consequence of Manchester and Leeds overheating, and becomes an attractive location for business due to largely congestion-free environments and the high quality of life.

Infrastructure

Plans for HS2 trains to run 'slow' from Leeds to Newcastle, the northern terminus, were replaced with a firm commitment to extend the line to Newcastle, and this is achieved in the 2030s. The HS3 line from Liverpool and Manchester to York and Newcastle across the Pennines is implemented in 2020s and becomes highly successful.

The Scottish Government decides to commence building a high speed railway route along the East Coast from Glasgow/Edinburgh southwards to Newcastle, supported in part by EU transborder funding. Political and practical problems ensue with negotiation issues prevalent between North East councils and between the Scottish Government and English Parliament.

A Newcastle Blyth Ashington Morpeth Newcastle rail passenger 'North Eastern Circular' Blyth and Tyne railway line is re-opened: the route is electrified after several years although the rolling stock, initially, is inherited older trains migrated from surplus use in the south.

The A1 'bypass' route between the Team Valley and Newcastle Airport, to the west of Newcastle city centre, is in danger of becoming unacceptably congested by 2025, causing alternative transport modes to be considered and opening up the west and north sides of the city to development options.

Newcastle Airport is designated as an Enterprise Zone, with growth of office, hotel and logistic services putting pressure to deregulate green belt in that location and contributing to urban expansion to the north east of the city.

An airport passenger rail loop is incorporated into the Scotland-North Eastern High Speed Railway.

The Tyne and Wear Metro comes under the control of Transport for the North.

Two new metro routes are added to the Tyne and Wear Metro network, opening up the west end of Newcastle to Scotswood and the Team Valley and Low Fell from Gateshead.

Port developments in North Shields put pressure on infrastructure and urban patterns in East Newcastle, with intermittent plans to build a new electrified rail freight link from the East Coast Main Line to North Shields and Newcastle Harbour, using a long disused four miles long rail line.

The East Coast Main Line is realigned westwards to avoid Cramlington.

A new intermodal rail freight terminal to serve the North East, links to port and airport hubs and to Scotland, opens on a site between Newcastle Airport and Cramlington, at Shotton and Brenkley.

A new Tyne River passenger service is implemented between North Shields and Newcastle, with a fast direct catamaran service and a separate stopping service calling at Willington, Wallsend, Walker, Ouseburn, Swing Bridge, and Stephenson Quarter.

Demography, Growth and Urban Patterns

Newcastle with North Tyneside becomes one of the fastest growing urban areas in the North of England.

Quality of life and the relative cheapness of the property market become paramount issues in the attraction of '30 something' professionals to the North East initially from London and the South East, a trend that increases from 2010s into the 2020s, and from Manchester in the late 2020s and 2030s.

The existing higher residential property market in the centrally-located areas of Jesmond, Gosforth and Low Fell become prohibitively expensive for average earning Tynesiders.

The Gateway City status leads to an influx of European migrants in areas of North Tyneside and South East Northumberland.

Developments at the airport and port, and the designation of the Gateway City, cause urbanisation pressures for new housing, logistic and distribution points, and urban-edge office developments, at Shotton, Seaton Burn, and Dudley.

The Science Central development occurs west of St James Boulevard thanks to university investment but includes mixed use development. Areas bordering the site at Arthur's Hill, Westgate Road and Elswick are slowly gentrified. Less well off residents migrate out to parts of North Tyneside, North Newcastle and South East Northumberland.

A new southern entrance to Newcastle Central railway station supports the development of the Stephenson Quarter and causes redevelopment pressure along the Tyne riverside west from Queen Elizabeth II metro bridge to Elswick Business Park with mixed use developments.

Newcastle Grey Street, Dean Street and The Side are completely pedestrianized and vehicle-free from 2020.

Only electric vehicles are permitted in the Central Area of Newcastle and a Congestion Charge is introduced for city centre driving.

Electric vehicle recharging points are installed at all car parks in the city centre.

Two new city centre redevelopment hubs are designated, at Pilgrim Street, and the Discovery Quarter/ Scotswood Road.

The underused Tyne Railway Yard, Low Fell, Gateshead, is redeveloped for mixed use development, with housing, education, retail, and culture, and includes a new metro railway station for access to the Angel of the North.

The successful railway engineering and manufacturing centre at Newton Aycliffe, south of Newcastle, originally developed in 2017 for Hitachi InterCity Express (ICE) trains, leads to further international orders and coalesces manufacturing opportunities there for further education colleges and apprenticeships.

Newcastle's National Institute for Ageing Science and Innovation is completed in 2021 and leads to the development of a highly specialised cluster of hi tech firms in the west of the city centre.

As a consequence of the development of arts/media services and the electronic gaming industry, two new university campuses open at the former Tyne Railway Yard at Gateshead and at Byker/Walker. SMEs also develop rapidly in this sector in the region with increasing demand for small business spaces. These spring up in older and under-used areas of the urban area and in the city centre.

Leisure, Recreation, Culture and Well Being

The High Level Bridge Newcastle, the Robert Stephenson designed 1849 Grade I listed structure, is designated a vehicle-free route and developed into a predominantly pedestrian walkway and tourist attraction with Visitor's Centre.

The Stephenson Museum opens at the Stephenson Quarter, devoted to the lives and works of George and Robert Stephenson. Small electric passenger vehicles offer visitors the option to ride from the Museum across the High Level Bridge.

A new visitors centre is built at the site of the Angel of the North, Gateshead.

An annual Boat Race Festival is held on the River Tyne between Wylam and Dunstan Staithes, and a Yachting Regatta is held at St Peter's Quay and Newcastle Quayside, each July.

Scenario 2: London implodes: rebalancing the national economy 1/4

	Social	Technological	Economic	Environmental	Political	Values (Culture)
Overall Picture	Population increase of 150,000.	Region is world leader in several manufacturing sectors.	Balance shifts to agriculture, primary production and manufacturing	The region enjoys a healthy urban and rural environment. The regional ecosystem services are valued and are taken into account when planning the region's future.	Remain inside EU but Scotland has ceded from Union	Newcastle is first city in UK to be designated as a 'Lifelong City', reflecting changes undertaken to built environment, urban design, urban spaces and transport systems to accommodate the needs of all people irrespective of age and mobility impairment.
Education & Skills	No NEETS by 2050 Strong pathways for further education with options for apprenticeships for vocational routes to employment	Regions Universities lead the way on MMOCs and other online forms of learning. Also strong regional research program to support key local business sectors	65%+ Graduate retention rates. Universities integrated into the region		Changing role for higher education. University campus Newcastle and Northumbria hosting some public services in future.	The Youth Council for Tyneside is supported and enhanced with a new mandatory programme of community activity work built in to schools' and academies curricula and youth development programmes
Health & Ageing	Retention of young adults and in-migration retain a balanced demographic profile.		Symbiotic budgets across NHS, Local Government and HEI results in better resource management and outcomes for elderly	Low emission housing also cuts housing costs for all and improves health. Better cycling and walking options also boost health.	Widespread political support for Newcastle an 'age friendly city'	Older population valued in providing social and cultural vibrancy to the region

Scenario 2: London implodes: rebalancing the national economy 2/4

	Social	Technological	Economic	Environmental	Political	Values (Culture)
The economy of the region	Balanced economy means balanced well educated society with full employment	Region a world leader in several sectors with an economy based on high value knowledge intensive industry	A balanced economy reaching all parts of the region. Strong regional business institutions	Part of the attraction for workforce is the regions environmental quality.	Some central government departments decentralized to the North East with economic development prospects.	A true cultural economy is developed in the region based on the region's cultural and human assets
Public transport	Expansion of the light rail system to the North East and west of Newcastle reconnects these area to the urban core	Fully integrated and smart transport system is developed.	Congestion is kept to minimal levels and the super connectivity of the region boosts business investment	High levels of public transport use reduce carbon emissions.	Devolved governances allows the region to control all aspects of transport infrastructure	
Technology	Technology is harnessed for the benefit of all in the region. Specific measures are taken to ensure equality of access to new technology.		The regions early adoption of new technology enhances its attractiveness to businesses.	Use of technology assists in the development of more sustainable ways of living and working	A flexible, transparent and timely devolved decision making process allows the rapid adoption of new technology	
Newcastle City Regions place	Region is a strong voice amongst the various regional governments.	The region's businesses and universities are in the top quartile in term of research and innovation in EU/World.			Full regional devolution with strong links to national and EU institutions.	

Scenario 2: London implodes: rebalancing the national economy 3/4

	Social	Technological	Economic	Environmental	Political	Values (Culture)
The social networks within the region	Other infrastructure retains its strong social networks and regional sense of identity.	Technology is used to enhance not replace social networking within the region	Strong business social relationships are fostered to create a supportive economic ecosystem to connect every type and size of business		Residents, though the voluntary and community sectors, are given a much more significant say in service provision.	
Other infrastructure	Newcastle's equivalent to the High Level Line in Manhattan: the disused 'coastal loop' railway from Byker metro station through Walker to Wallsend metro station, is upgraded and designated for walkers as The Geordie Way.			A city wide cycle network is implemented using segregated cycle highways on designated routes through the city.	A concerted effort is made to encourage walking for health purposes with the designation of several new '3 mile' projects.	
Housing	Metro expansion finally unlocks long-promised housing development at Benwell and Scotswood immediately west of the city centre.	Smart grid metering is rolled out to all Tyneside houses through the 2020s	The affordability and diversity of housing in the region attracts young adult workers to the region though this does create house price pressures in certain areas.	Long term programme in place as partnership between public and private sector to upgrade existing building stock to highest environmental standards.	Strong partnership working in the Combined Authority allows a long term region wide strategic housing plan to be adopted.	
Cultural institutions		Redevelopment of the Ouseburn area causes pressure for culture and arts related projects at the mouth of the Ouse on the River Tyne Quayside.				

Scenario 2: London implodes: rebalancing the national economy 4/4

	Social	Technological	Economic	Environmental	Political	Values (Culture)
The built environment	Areas north of Newcastle are developed rapidly thanks to increasing population and the opening of the North Eastern Circular Railway to Blyth and Morpeth.			New housing estates and railway stations are built at Palmersville, Shiremoor, Seghill and New Hartley with rail commuting times to central Newcastle of approximately 20-30 minutes		
The natural environment	The social benefits of a clean and bio diverse natural environment are recognised and measured as part of the aims of the region.	Drawing on the local research expertise the region has some of the world's most developed resilient infrastructure in the face of a range of climate challenges, extreme weather events, sea level rise and drought	Working with the natural environment is part of the regional economic offer. This extends well beyond tourism linked to rural	The natural assets of the region are greatly valued. The pressures of success however must be monitored and mitigated.	Newcastle and Gateshead's green spaces are viewed in a deeper multifunctional way, for the range of services they perform including recreation, biodiversity, flood prevention, and food growing.	The quality of the regions natural and historic environment is at the heart of the culture of the region
The national and international institutional and political networks	Good governance is at the heart of the region's success. There is widespread engagement with the political process across society.	The region is viewed as being at the forefront of technology adoption across all aspects of society.	The region's economy is well connected externally through the expanded sea port infrastructure and airport as well as nationally through its intermodal transport hubs.		The region's experience and track record on achieving balanced sustainable growth is widely valued and copied in other regions.	There is a vibrant political culture within the region and participation within the democratic process.

Scenario 3: Newcastle finds its niche: test-bed city

Context

Politics and governance

The Combined Authority becomes more assertive and confident and enters negotiations with Whitehall after 2016 to secure devolution in the North East.

The city is identified to achieve Future City status within Europe.

Elections for an elected mayor for the devolved area occur in 2017.

A vision for the North East is developed collaboratively based on identifying the unique assets of the city as a living laboratory for developing and implementing solutions for smart, sustainable and inclusive growth that can be applied globally.

Politicians and citizens identify the North East as possessing a long and successful reputation for delivering major capital projects with science and technology at the heart of future visions and plans. its status as the 'Goldilocks City Region', not too big, not too small and with all the infrastructure and institutions to be found in larger cities, is seen as being key to unlocking its role as a test bed city region.

The mayor and Combined Authority embark on a campaign to champion the North East both within and beyond the region, through the home region's press, radio and television.

Citizens in Newcastle and the surrounding area become empowered to trial new technological developments, such as electric vehicles and smart grids, a trend that is seldom seen in other major cities. This test bed, in turn, attracts the attention of global businesses.

Public services are delivered through the Combined Authority but together with other public and voluntary/community organisations in the cities using smart technology in a socially inclusive way.

New concordats are agreed for trade and networking purposes between the North East and Scandinavia. Newcastle places itself at the heart of a new international effort to bolster 'the North Sea Region' with European cities on the eastern side of the North Sea.

A group of cities become 'Beacons' for urban development (Amsterdam, Gothenburg, Hamburg, Newcastle, Oslo and Stockholm) echoing the Hanseatic League.

Economy

The city and regional area builds a balanced economy with science and engineering at its heart. Building on its existing strengths in automotive manufacture, biomedical science and sub-sea, the region develops strong complimentary clusters in the low carbon technologies (i.e. electric vehicles, new battery technology and smart grid systems) and linking biomedical advances to tackle the major social challenges of ageing and climate change. Digital technologies are used to re-engineer public services in an inclusive way such that Newcastle is an inclusive as well as smart city. These pioneering services are exported by local businesses.

In the wake of greater devolution in 2025 the region establishes a variety of financial institutions to support long term development of the key business sectors in the region. These institutions include a Regional Investment Bank and the region's first Fraunhofer type institute to link research in the regions' universities and the region's businesses and civil society.

By 2040, a vibrant ecosystem of supporting institutions, start-up challengers and related service sector businesses, have grown up in the region. The region now retains over 80% if its STEM graduates and 65% of other graduates. The region has one of the highest start-up rates in the UK particularly in relation to Knowledge Intensive Business Services and is a greater contributor to the nation's net balance of trade.

The existing network of rural enterprise hubs has been expanded to reach all areas by 2020 and is also linked closely to a network of similar urban enterprise hubs. This has resulted in a much more balanced rural economy. This is particularly beneficial for the growing digital media economy and creative clusters in the urban area.

11

Infrastructure

Development as a global hub for urban experimentation leads to both Newcastle airport and the deep-water port at South Shields being expanded as pivotal gateways to and from the region.

New air and ferry services commence throughout the 2020s and early 2030s across the North Sea to Bergen, Oslo, Stockholm, Hamburg, Helsinki, Bremen, Copenhagen and Riga.

Train service patronage after 2033 between the North East and London remain constant compared to passenger numbers prior to the opening of High Speed 2. The introduction of new Hitachi Intercity Express (ICE) trains from 2018 prove to be a great success.

The development of High Speed 3 services to Leeds and Manchester leads to an increase in passenger numbers and more frequent services.

Energy and power generation installations both on and off the North East coast support the redevelopment of Blyth, Cambois and Lynemouth with the strengthening of under utilised rail freight routes.

Transport for the North supports the construction of new metro lines to Washington, in North Shields, and south of Sunderland. The Blyth and Tyne line is now carrying passengers.

The city centre in Newcastle becomes a test bed for Ultra Low Carbon Vehicles with all university, hospital and council vehicles, and all taxis and buses, transitioning to a Zero Emission type.

Electric vehicle charge points are expanded across the city and the rural hinterland with associated EV friendly technology. The development of hydrogen vehicles and infrastructure is also accommodated.

Parking spaces for elderly drivers are designated in city centre locations. The region will demonstrate and develop the concept of autonomous driving with its centre for ageing and vitality.

The number of cruise ships visiting the Tyne increases from 20 a year in 2015 to 40 by 2030 causing the expansion of the port's cruise terminal and developing strategic transport services into Newcastle city centre.

Demography, Growth and Urban Patterns

The vision for the city as a test bed for advanced engineering solutions to urban challenges results in strategies to expand and support three principal areas: power generation and distribution, electronic signaling and cloud computing.

Both Newcastle and Northumbria Universities instigate an expansion programme in engineering related subjects, and new higher education hubs are opened at Science Central, Washington, and North Shields. The media label Tyneside 'the UK's engineering powerhouse'.

The university sector in the region supports a 'Smarter Region' initiative for the retention of graduates with new alliances formed with major companies and customized degree and training programmes established particularly related to digital civics and cultural industries.

A new programme of apprenticeships is established between the region's colleges and major engineering and technology firms.

The Rail Academy in Gateshead, first opened in 2015, celebrates its 10th anniversary by announcing a major expansion.

Some colleges merge and achieve university status as the 'Science and Technology University Newcastle'

Schools work with FE and HE to provide pathways into the region's growing engineering base.

New housing development occurs across the region, in South East Northumberland, Gateshead, Washington and Aycliffe to support population growth and new employment areas.

There is an influx of population from other regions of the UK and from in-migration as employment opportunities are enhanced.

Higher quality smart housing is proposed to suit senior management in areas to the north of Newcastle including around Ponteland, Widrington, Acklington, and Alnwick but is fiercely resisted by local communities.

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As part of 'the demonstrator city' initiative, local planning statues are created with a mandatory requirement for all new development projects constructed to build in technological innovation.

'The demonstrator city' initiative supports showcasing new technology developed within the North East to benefit homes, workplaces and connectivity for national and international profiling – for example retrofitting homes to support the 'internet of things'.

Professional and consultancy services linked to the region's advanced engineering (e.g. system design and implementation) grow exponentially, which assists employment generation and wealth creation.

Leisure, Recreation, Culture and Well Being

New hotels and conference centres are opened at former large country houses in Northumberland and County Durham.

Hotel occupancy at weekend is the highest of any urban centre outside London in 2015 and there is demand for new hotels as prosperity increases in the early 2020s.

Boutique leisure hotels and high class restaurants develop at locations in Newcastle city centre and on the quayside, and there is an increase in employment in hospitality services.

Major companies in the region support the development of social and well-being programmes to support employees and their families.

The region continues to host major sport and recreation events in football, rugby, athletics, cricket, and starts to attract internationally-acclaimed sports stars. Ticket prices for major sporting events rise dramatically.

Health indices in the region gradually improve thanks to a general demographic shift and with the support of technological advancement in life sciences, biomedicine and stem cell research at the region's major hospitals. Air quality improves with the decarbonizing of transport and energy generation.

The cost of living differential between the North East and other regions of the England, starts to narrow in the mid 2020s.

By 2025, the mayor announces new funding to support ways to manage the negative externalities of growth and prosperity with a focus on the ageing society, young people and migrants.

Arts and culture centres in the region thrive with the uptake by citizens and visitors of new leisure-based pastimes, food marketing and cultural initiatives.

The number of golf course schemes announced across the region causes a growing number of groups to campaign to protect rural Northumbria and County Durham.

The ongoing success of the Great North Run with its culture and media developments continue to enhance the perception of Newcastle on the international stage. This is taken to a new level to showcase other successes.

Scenario 3: Newcastle finds its niche: Test-bed city 1/3

	Social	Technological	Economic	Environmental	Political	Values (Culture)
Overall Picture	Population increase of 40,000	Major industrial and university partnerships to research and test technological advances	The region has a balanced economy with high employments and productivity above national average	Sustainable development through a green/blue economy drives progress	Strong regional governance inside strong EU	Open culture, strong balance between economic and cultural activity
Education & Skills	Lifelong learning and collaborative research reaches all areas and levels of society.	Technology is embedded within education and technology based skills are at the heart of education	Parity of esteem between traditional academic and in-work training pathways		Highly skilled public fully engaged in all aspects of political process. Bottom-up political process	Lifelong learning and openness to change at heart of the regions education system at all levels
Health & Ageing	Combined budgets allow social and health care provision to be taken together. This also allows synergies with other areas (housing etc)	Region uses technology to be a lifelong region. Technology allows all ages to live fulfilled lives.	The region commercialises many if its knowledge, products and services designed to aid an aging population	The health benefits from the better physical environment lead allow a greater focus on preventative measure to improve lifelong health	All ages are included in the political process within the region. Intergeneration disputes are avoided.	The region 'walks the talk' on an age friendly region which includes Intergeneration equality
The economy of the region	High levels of employment. No NEETS.	The region is a world leader in the research, application and adoption of new technology at the regional scale.	Strong regional economy with public, private and academia working closely together.	Sustainable development extends throughout the region's economy.	Strong political partnerships between public, private sectors and academia deliver political stability which underpins economic stability	"Back to the future." The enterprise demonstrated by the region's Victorian forefathers recaptured for the post carbon age.
Public transport	Social mobility is enhanced through greater transport mobility which is fast, efficient and affordable.	Fully integrated public transport system which is open to new technology	Cheap and easy to use public transport has improved economic performance and productivity	Clean low carbon energy is as the heart of public transport. Much higher environmental conditions throughout the region	Transport for the North (TfN) takes control of public transport infrastructure in 2018.	The region values its public transport system and is open to change and new technology.
Technology	Technology is harnessed for the benefit of all in the region. Specific measures are taken to ensure equality of access to new technology.		The regions early adoption of new technology enhances its attractiveness to businesses.	Use of technology assists in the development of more sustainable ways of living and working	A flexible, transparent and timely devolved decision making process allows the rapid adoption of new technology	

Scenario 3: Newcastle finds its niche: Test-bed city 2/3

	Social	Technological	Economic	Environmental	Political	Values (Culture)
Newcastle City Regions place	The 'Geordie' culture of openness and friendship allows the region to integrate widely but retain its individual social character.	Demonstration status raises the profile of the region across the world.	The region is the go to place to understand how to develop a future- proof economy,	The many natural assets of the region are enhanced and act as an ever greater pull factor for the region	The regions strong stable and collaborative political structure provides a great platform to engage in wider political networks.	A proud and open culture engaged fully with the wider world.
The social networks within the region	The region's strong social bonds are maintained and even enhanced.	The role of technology is seen to be the servant of society not vice versa.	The local buzz of the region created through its rich, extensive and vibrant social networks are a key to its economic success		There is wide participation in the political process through a myriad of social networks.	A highly connected and engaged community. A vibrant network of networks reaches all areas.
other infrastructure	The development of infrastructure enhances social equality.	Smart transport systems facilitate low carbon transport and dispersed utility provision	Much of the region's economy is devoted to supporting innovation in infrastructure and commercialising its outputs	In 2020 grid parity is achieved with renewable energy generation exceeding traditional sources	The resilience of infrastructure is politically understood and incorporated into long term planning	
Housing	Combined budgets means poor housing is tackled as part of overall wellbeing issues.	By 2025 the region has a series of 'future proof' building standards which ensure housing can accommodate new technology	Coordinated housing development guarantees the affordability of the regions housing which can cope with developing economy	70% of housing stock in the region in highest EPC grade by 2050	The existing collaboration on the identification of housing land matures into a long term plan for the region with widespread acceptance	A coordinated transparent and inclusive approach to housing development ensure the regions balances supply & demand

Scenario 3: Newcastle finds its niche: Test-bed city 3/3

	Social	Technological	Economic	Environmental	Political	Values (Culture)
Cultural institutions	Cultural institutions are valued on a par with all other institutions	The cultural institutions play a vital role in mediating the rapid technological change in the region.	Cultural activity continues to play a positive direct and indirect economic role on the region		Cultural institutions are valued politically as being what gives the region its identity which underpins other institutions	
The built environment	Place making and the viability of communities is the major long term goal of strategic planning	Technology is embedded at the heart of the development of the regions build environment.	The build environment enhances the economic offer for the region.	Sustainability is at the core of the long term physical development of the region. Integrated transport and high environmental quality of development ensure this.	The political commitment to long term strategic thinking allows the region to develop a compact region.	
The natural environment	The social and well-being aspects of the natural environment are well recognised.	The precautionary principle as adopted by the region ensures the natural environment is protected when new technology is introduced.	The success in economic terms of the post-carbon regional economy acts as a example to other regions.	The region leads the way in the transition to a post-carbon economy which reaps benefits for the natural environment.		The regions natural assets and the significant contribution of the regions ecosystem services are political valued.
The national and international institutional and political networks		The region plays an important role in a variety of regional and global networks particularly in technology adoption within society.	By 2020 a global carbon market has been created and citizens issued with carbon accounts	The regions leadership role in transitioning is recognised globally	The collaboration established in other areas is particularly powerful when the region looks outwards.	

12

EMBEDDING NEW METHODOLOGIES IN THE UNIVERSITY AND THE CITY
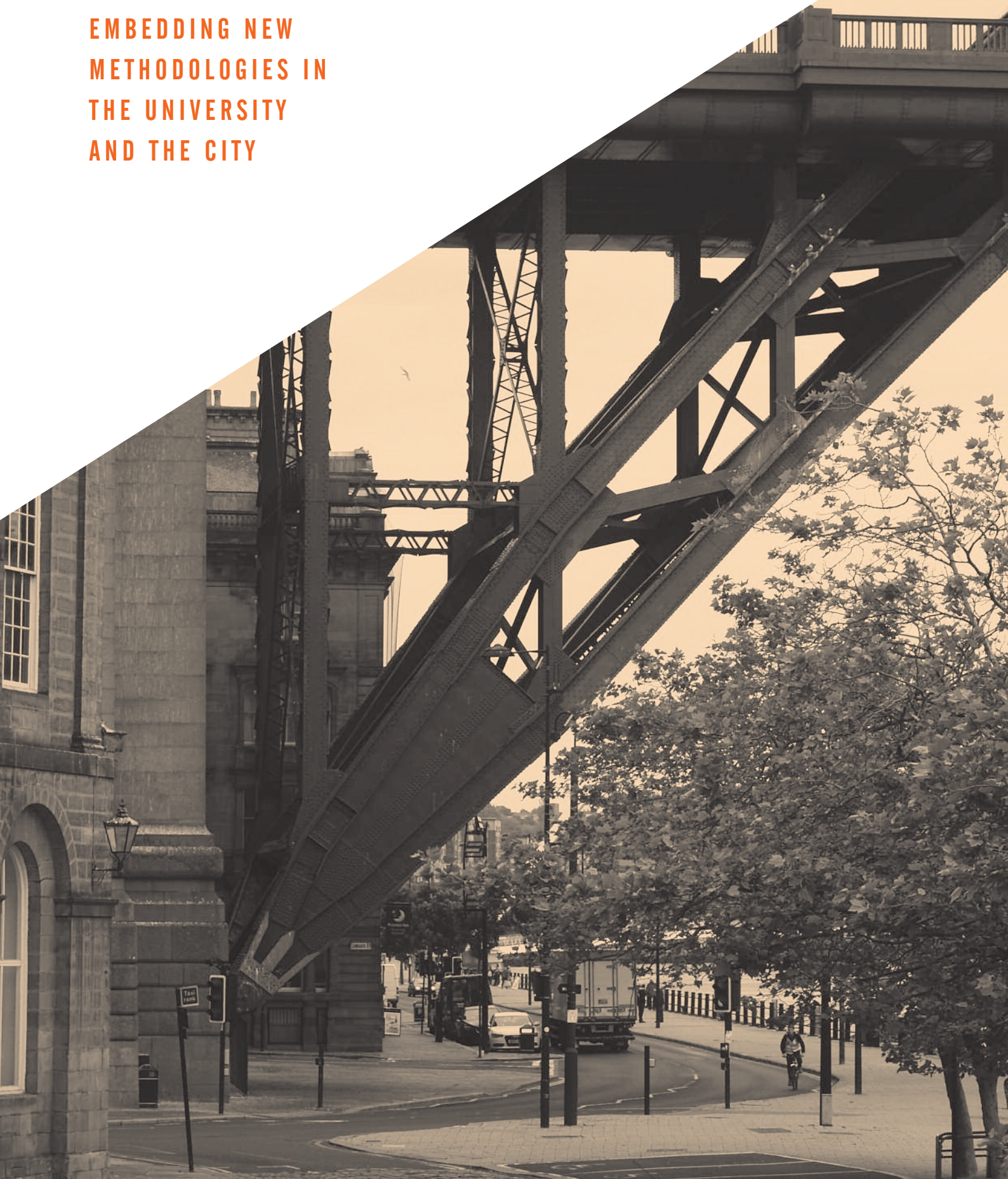
12.1 As the project team developed the Newcastle City Futures 2065 project and embarked on the various methods to inform the work, a concerted effort was made to develop lasting collaborative partnerships. These partnerships were intended to be with various academic experts across the three faculties of Newcastle University, and between the university and outside organisations representing government, business and civil society. This commitment was in the spirit of Newcastle University being a civic university, working with partners in the city in which it is located and finding new opportunities for engagement, collaboration and research.

12.2 Each of the six methods employed in the course of the project (see chapter five) necessitated dialogue and engagement between the project team, on behalf of the university, and a range of public, private, voluntary and community organisations. On occasions this dialogue was in the form of calls for information and data, participation in surveys and workshops, talking through specific issues that had wider effects beyond one organisation's scope and remit, or capturing trends and flows over time and space.

12.3 The project team did not set out to develop a new model of cross-disciplinary or cross-organisation collaboration with the university at the centre. However, as time passed, it became clear that the various partners involved in the project methods were starting to identify with the aims and objectives of Newcastle Cities Futures 2065. Some of those organisations relied on the project and project team as a neutral broker or facilitator in a much larger conversation relating to city-wide issues. This occurred at a time when many city services and city governance processes were under scrutiny both within and beyond Newcastle.

12.4 Since May 2014, several projects were started in and around Newcastle that had a defined city futures focus that the project team initiated, facilitated or engaged with directly as a consequence of the Newcastle City Futures 2065 project. These included:

Newcastle City Futures exhibition and events: as identified in chapter seven, the free public exhibition and series of interactive events in May and June 2014 at the Guildhall, Quayside, led by Newcastle University in partnership with a range of public and private organisations was regarded as a success. It prompted many of the partners to continue the dialogue on presenting their work to new audiences and in thinking about the future. To date, there have been several legacies emanating from the exhibition and events including:

- working with Planning Aid and the Royal Town Planning Institute in schools in the region on shaping the future city and generating youth participation in policy debates and exchanges;
- participating in discussions led by the Royal Institution of British Architects and Northern Architecture on the outcomes of the Farrell Review on architecture and planning (Farrells, 2014), particularly on the development of a possible Urban Room for Newcastle and the North East;
- leading, introducing and shaping new film commissions and film screenings on Newcastle the city on screen, including a screening at the Tyneside Cinema of Terence Davies 'Of Time and the City' (2008) and its relevance for Newcastle; the screening of Newcastle University alumnus Jack Fisher's hyperlapse films 'Newcastle in Motion' (2014) and 'Newcastle International Airport in Motion' (2015);
- introducing a new module for undergraduate students on the Architecture and Urban Planning degree in the School of Architecture Planning and Landscape at Newcastle University entitled 'The Urban Room', led by the Newcastle City Futures team, educating students on how to embark on a visual city-wide engagement process and design a city futures exhibition space;
- liaising with the Centre for Virtual Reality in the School of the Built Environment at Northumbria University on the development of a new postgraduate degree programme entitled 'Futures Cities' for commencement in September 2016;

Newcastle 2020: a consortium city board led by the Chief Executive of Newcastle City Council and comprising senior representatives of the public sector organisations in the region, discussing the implications of public cutbacks and austerity, and finding new ways to meet public service delivery. Presentations have been given to the group on future trends in Newcastle.

Newcastle City Futures Development Group: formed in January 2015 at the invitation of Newcastle City Council. This group is chaired by Professor Tewdwr-Jones and comprises experts from across two universities, the city council, the Local Enterprise Partnership, and business interests. The group performs two roles: to engage with policy officers on discussion of long term trends affecting the city; and to discuss and disseminate ongoing and emerging research undertaken at Newcastle University that have implications for the future of the city. See Box 1.

Newcastle Policy Cabinet futures group was formed in September 2014 at the invitation of Newcastle City Council, to advise the Leader of the Council on possible future long term trends affecting the city and to provide intelligence to the city council public-facing Policy Cabinets on specific themes, including community development, education and skills, youth employment, and mental health.

Foresight Future of Cities Research Network: As the Newcastle Foresight project progressed in 2014 and simultaneous to the closer links being forged between academic experts and policy forums, Newcastle University made a bid to the Government Office for Science to establish and coordinate a new research network comprising of universities that are working on city futures methods, research and policy engagement. The network is comprised of dual partners in each city, to demonstrate the close links between the university and the city in which it is located and to engage knowledge and ideas on ensuring that universities become effective anchor institutions in local engagement and growth. The network commenced meeting in January 2015. See Box 2.

12.5 The speed with which the university-policy relationship developed in Newcastle as a consequence of the city futures and Foresight project work is best illustrated in Figure 1. In a short period of time, and prior to the completion of the evidence contained in the Foresight report, key policy organisations in the city expressed support to discuss long term futures in new ways. Part of this agenda was to find collaborative ways to address complex city problems beyond traditional disciplines and sectors, reflecting the complex governance and organisational environment that is a hallmark of 21st century cities. Two further objectives were: to identify cross-cutting opportunities for future research projects, and; to develop opportunities to initiate collaborative city-wide engagement opportunities with communities and citizens. This would enable members of the public to play an active role in developing and reacting to policy proposals during a period of tumultuous change.
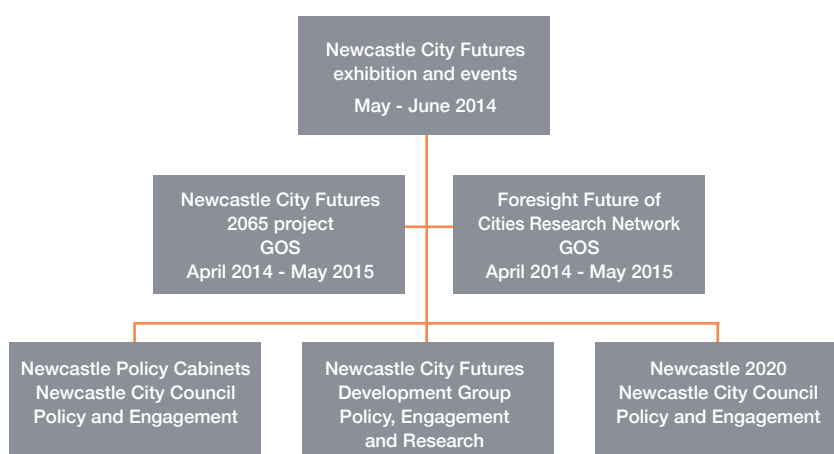

Figure 1. The evolution of policy and engagement processes from Newcastle City Futures Foresight project and the Newcastle City Futures exhibition after May 2014.

12.6 In addition to the development of new processes for university-policy engagement in Newcastle resulting from the Foresight work, simultaneous efforts were made by the project team to initiate cross-disciplinary working within Newcastle University more specifically on the cities theme. Following on from the initial database work identified as one of the Foresight methods (presented in chapter eight), it was possible to identify themes within research at Newcastle University (from scrutiny of REF documentation and recent successful research bidding activity) that could be identified as distinctive to the university.

12.7 Significant amounts of new research are underway in the university related to cities, where Newcastle University already possesses an excellent reputation for this work. This research work may not have been developed originally in response to the Foresight process, but the work has been influenced by Foresight thinking and methodologies. This has resulted in the development periodically of inclusive cross-disciplinary agenda workshops between experts across faculties, and the initiation of several bids in response to funding opportunities. Newcastle University has now established a multi-disciplinary 'Cities Initiative' group made up of the leaders of the University's societal challenge themes of Ageing, Sustainability and Social Renewal based respectively in the Faculties of Medicine, Science, Agriculture and Engineering and Humanities and Social Sciences with a common interest in city futures. Indeed, cities are now seen by the university's Executive Board to lie at the intersection of these three societal challenge themes.

12.8 A distinguishing characteristic of the civic university occurs: through the development of engagement and facilitating techniques; through the innovative use of systems thinking and future scenarios; and through researchers' direct involvement in the policy making process, by drawing together social science and science skills within university and between the university and the public and private sectors.

12.9 All the initiatives identified in paragraph 12.4 relating to the present and future of Newcastle have occurred since June 2014. There is evidence to suggest that there is an opportunity to capitalize and develop university research work to meet long term urban needs through a number of approaches:

1. Capitalising on existing strengths and assets within the university;

2. Collaborating with public, private, community and voluntary sector partners;

3. Communicating with different interest groups within and beyond the city;

4. Disseminating new research and ideas to policy makers, businesses and citizens; and

5. Identifying and supporting blue chip grant applications and high quality publication writing.

12.10 Encouraging the development of inter-disciplinary city-focused research and engagement will require a coherent approach across the university, resourcing, marketing and disseminating academic work more prominently, and creating an appropriate institutional architecture that offers opportunities for staff at all levels to get involved in city future initiatives. Such an investment would have the intention of building on staff interests and reputations to enhance the university's standing and activity in city futures. The vision would be to draw these together to develop a critical mass of world-leading research with associated international networks, addressing some of the big societal challenges associated with cities in the 21st Century. All of these initiatives indicate the strong potential to enhance the university's social science credentials as they can be applied to science, engineering, health and humanities work. There is also the potential to develop stronger and meaningful international networks, and to practically implement the civic university role on the global stage.

12.11 What has been witnessed in Newcastle, therefore, is the emergence of an alternative model for higher education interaction with city development. Figure 1 sets out the evolution of the city futures commitment in Newcastle after May 2014. It first emerged as an innovative city-wide visual engagement process in the Newcastle City Futures exhibition that corresponded to the commencement of novel participatory opportunities as part of the Newcastle City Futures 2065 project. But, as figure 2 sets out, within a few months, this had evolved into a potential policy platform organised in the City Futures Development Group involving a range of public organisations in the wider city region, eager to be part of a neutral futures-facing attempt to consider long term options for Newcastle. From this policy platform, a series of cross-disciplinary conversations started both within universities and between universities and policy organisations, including through the Cities Initiative group, to identify cross cutting research opportunities.
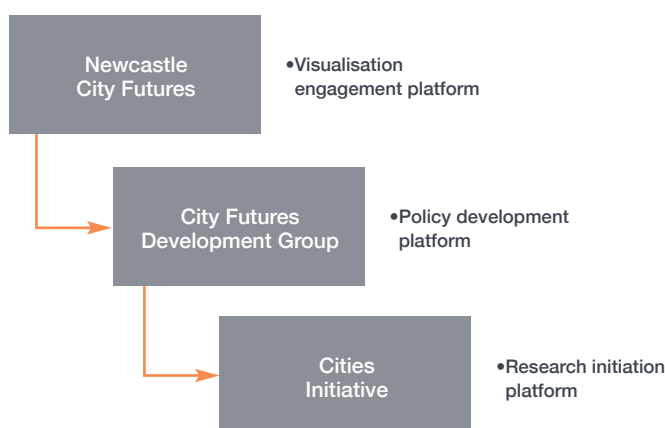
Figure 2. The embedding of Newcastle City Futures Foresight project from a visualisation and engagement platform, into a policy development platform, and more recently into a research initiation platform within the university.

12.12 Attention is now focusing across the three platforms on specific areas and themes that could be developed further. The city council has prioritised four themes as part of the Newcastle 2020 group: NEETs; ageing; digital; and infrastructure. Newcastle University has recognised international research strengths in: democracy and governance; health and demography; digital and smart technology; and infrastructure and engineering.

12.13 It was apparent to the project team that national Foresight programmes of the Government Office for Science make extensive use of academic experts in future studies but seldom is this expertise brought back home to the academic's host institution to guide its contribution to the future of its city. The Foresight Future of Cities Programme led by Professor Sir Alan Wilson established a pilot programme in Newcastle to explore the methodology of mobilising the knowledge base of the university to work with others on the future of the city region.

12.14 The success of this initiative and the embedding processes that have occurred within both policy and academic contexts led the Government Office for Science to sponsor a separate network of cities and universities working on city futures but co-ordinated by Newcastle University. This network provides a forum for building a community of practise around the methodologies for collaborative working on city futures within the 'quadruple helix' of higher education, business, government (local and national), and civil society. Links have already been made with the recent Royal Society for Arts City Growth Commission, the Future of Cities Catapult, and to a range of European initiatives such as the Horizon 2020 cross-cutting theme of Science With and For Society which is taking forward the Rome Declaration on responsible research and innovation, and the EC's regional funds on innovation. The task ahead is to identify opportunities, develop a futures dimension to this work, and develop cross-thematic possibilities.

Box 1.

City Futures Development Group Newcastle

Aims:

A collaborative arrangement between universities and Newcastle City Council, the NELEP, and other policy organisations.

The purpose is to provide a one-stop shop for the universities, Council, LEP & industry to discuss emerging and new areas of research that could be of benefit to the city, to identify ongoing research being undertaken at the universities and colleges that could be disseminated to a policy audience, and to hear of city intelligence needs to inform future research project bids.

CFDG is committed to:

Improving services, quality of life and economic growth utilising existing academic & industry excellence

Creating opportunities for research & product development by facilitating access to infrastructure & residents

Ensuring that Newcastle is seen as a test-bed for innovation, providing further chances for research, investment & business growth

Developing partnership and joint working between academia, industry & the public sector.

Working practices

- Identify potential projects that focus on ageing, digital, infrastructure, NEETs
- Develop new collaborative arrangements across experts and organisations
- Sharing intelligence, data and ideas in brainstorming conversations
- Disseminating work and initiating conversations
- Utilising visualisations to inform and educate citizens of developments and changes

Box 2.

Foresight Future of Cities Network

Newcastle University, Liverpool University, Manchester University, University College London, Cardiff University

Context

A growing number of cities are joining the Foresight Future of Cities project. In several instances the local university or universities are playing a key role in mobilising academic and other local sources of knowledge and expertise to build capacity to undertake an ongoing and sustainable city futures process. More specifically in the Foresight process the universities are demonstrating that by working in partnership with others they can play a leadership role as an 'anchor institution' linking the city to global bodies of knowledge.

The city events hosted by national Foresight have revealed a wide range of methods that can be used to build this local capacity including local variants of national Foresight structures and processes (Lead Expert Group, Stakeholder Group, state of knowledge reviews, scenarios and systems mapping). In addition other methods are being deployed such as public exhibitions, Delphi surveys, competitions, various social media and civic leadership development programmes with the aim of facilitating the participation of civil society more widely in debate about the future of the city.

The national Foresight Team has been able to engage four cities where the link between a university and city in the Foresight process is taking shape. These are Newcastle, Liverpool, Cardiff and Manchester. In addition UCL has been linked to the Cities Foresight to build on international work on city leadership which is relevant to UCL's mission to be 'London's Global University'. The teams in these five universities bring a range of expertise to the Foresight Future of Cities project.

The network

The Foresight Future of Cities Research Network links the five university groups with experience and expertise in the city foresight process which will be shared between the groups and with other cities currently participating in or wishing to join the project. The network holds workshops to:

- Review the opportunities and challenges in establishing local city Future of the City exercises that involve a range of stakeholders and civil society
- Identify the strengths and weaknesses of different methodologies and suggest how that can be combined
- Develop a framework for establishing a sustainable city futures process that is embedded in the practises of partners, particularly universities, local authorities and business.

The workshops are held in Newcastle, Liverpool, Manchester, Cardiff and London and open to other cities formally participating in the Foresight project with the expectation that the same team attends each event thereby contributing to the building a 'community of practise' around city futures. Members of the national Foresight team and Lead Expert Group in the Government Office for Science are also invited.

Newcastle University acts as Network Co-ordinator, providing a repository of documents on individual projects, reporting on the findings of each workshop and preparing a final report. The aim is to establish a 'community of practise' in city foresight.

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13

FUTURE DIRECTIONS FOR RESEARCH AND ENGAGEMENT

13.1 This report has sought to examine the possible means through which city regions can engage with citizens, businesses, and government in a synoptic city-wide basis, on issues of relevance to the future of the area. In particular, the report has demonstrated how universities can play a facilitating role as anchor institutions in shaping conversations on the future direction of cities.

13.2 Cities across the United Kingdom are undergoing immense change at the present time. The impact of public sector expenditure cutbacks, the demise of long term strategic planning, and the uncertain role of intelligence and an evidence base to inform policy options, creates a vacuum for metropolitan governance that needs to be filled.

13.3 Simultaneous to the reduction in the size of the state, there is an ongoing proliferation of agencies and organisations responsible for the delivery of urban services across all sectors. These agencies are in danger of operating in a fragmented way that produces duplication, waste, and escalating costs for government, businesses and citizens. They are also accountable to different audiences.

13.4 Citizens of urban areas are increasingly diverse and municipal government has to find new ways to engage and communicate with all sections of the electorate. Traditional methods of engaging the public, through local elections, consultation exercises and even some forms of social media, are not sufficient in themselves at a time when the public are expecting instantaneous opportunities for both policy involvement and conversations on long term trends, often on their terms.

13.5 The changing context for the ways city government operate and interact with state, businesses and society creates a need for new models of engagement, intelligence support, and policy development for growth. The Higher Education Funding Council for England have already identified the possibility for universities to become anchor institutions within the cities they are located (HEFCE, 2014). Universities already possess collaborative links with local authorities and Local Enterprise Partnerships, are the recipients of European Union innovation funding, and are starting to develop multi-disciplinary research and engagement platforms to respond to society's 'grand challenges'.

13.6 The opportunities for universities to play a significant role in their own cities are not restricted to developing local economic growth alone. Universities can perform a civic role in generating new modes of political, business and social engagement at a time when higher education is assessed for its societal impact as well as its teaching quality and research performance. Universities are already developing new models for societal and business engagement while maintaining excellence in critical research analysis and appraisal, and facilitating scientific developments alongside social innovation. Higher education institutions can be remarkable, broad ranging and relatively untapped assets for cities once their full potential as civic universities are recognised. Furthermore, universities may also be seen as public bodies that, in some measure, retain the trust of large sections of society.

13.7 Cities are the engines of future growth, and there is a distinct possibility that further forms of devolution will transfer powers from Whitehall to metropolitan areas. As we enter a new governance and new economic landscape for our largest cities, there is a greater need for more reliable forms of intelligence, research evidence, and public engagement processes. Universities located within these metropolitan areas, together with think tanks, businesses, voluntary and community sectors, have a significant role to play in supporting a civic renaissance. Academic expertise can assist in the design of the methods employed to face future urban challenges and opportunities, and in the shaping of public policy dialogue between interested parties and residents.

13.8 Significant challenges lie ahead for city councils, service providers, universities and citizens in facing the future. In particular, efforts must be harnessed to:

• Provide a voice for the public, private, community and voluntary sectors;

• Mobilise all higher education institutions (HEIs) in the city region despite a competitive environment within higher and further education;

• Avoid duplication of forums where university and city partners are in dialogue;

• Collectively respond to national and European funding calls for research and innovation projects;

• 'Learn by doing', by working on collaborative projects with midterm measurable outcomes;

• Overcome the disjuncture between the technological focus of many recent funding programmes and much HEI research, and the local requirement for service and social innovations that could fundamentally shape how the future city functions;

• Shape the priorities of the Local Enterprise Partnership (LEP) which controls substantial European and national uncommitted funding and has its own 'smart specialisation' futures priorities that are often poorly linked to societal challenges;

• Work across local authority boundaries;

• Actively mine the intellectual resources within HEIs to contribute to city futures (not simply an audit of current work);

• Connect top down and bottom up processes within HEIs and local authorities when managers do not see the linkages and opportunity costs of responding proactively to city challenges and taking opportunities of engaging with the future of the city;

• Engage with the process of setting national and international agendas around city futures and the potential role of higher education; and

• Measure the impact of the collaborative endeavour and benchmark the local against best practise elsewhere.

13.9 None of these challenges are insurmountable. As this report has demonstrated, through a pilot study of emerging relationships and collaborative commitments within Newcastle, that building capacity for collaboration in city futures is possible, achievable and practical politically and institutionally. We conclude by setting out the key issues for cities and their universities to address if they wish to consider city futures as a broader agenda:

• Use a city futures perspective to get around all of the 'here and now' challenges of collaboration;

• Appoint a dedicated city futures partnership manager jointly between the university and local authority with access to senior offices in both organisations;

• Create a value added knowledge base by linking primary research in HEI with policy and practice research produced by the public and private sector;

• Launch a professional development programme for key individuals expected by institutional leaders to play a 'boundary-spanning' role between higher education and the city region, covering the 'know what' and 'know how' of futures work;

• Develop an 'action learning' programme for those individuals around selected mid-term projects; and

• Link up with other cities and universities nationally and internationally to create a community of practise around city futures.

City wide forms of public engagement in our metropolitan areas currently remain the exception rather than the rule. The time has come for the universities within cities to step up to the mark and engage proactively with local government. The development of customised urban intelligence platforms to inform policy development, and the design of new participatory techniques – inclusive of citizens and businesses – to allow cities to think long term and creatively should be considered an integral part of devolution and civic dialogue.

13.10 As we enter a new governance and new economic landscape for our largest cities, there is a greater need for more reliable forms of intelligence, research evidence, and public engagement processes. The project revealed that the data needs of cities are not always being drawn together in a coordinated way, allowing the right flow of information to go to the right people in a timely manner. Universities can play a central role in facilitating data sharing flows.

13.11 The design of a strategic approach to address the long-term future for cities with universities playing a central choreographic role needs to be framed by political decisions – for example, on the balance between city-wide and local powers; the relative importance of the various future challenges; and the relative roles of regulation, incentives and markets. Wider issues of resource availability and the inherent capacity of cities would also be a major consideration, as would the appropriate balance between economic growth, social progress, infrastructure provision, and environmental protection.

13.12 Strategic spatial planning in our largest cities is weak at the present time and has been replaced largely by incremental project-by-project decision-making. This report does not advocate the return of strategic spatial plans per se, but it does recommend the pursuit of some of the hallmarks of strategic spatial planning processes. These include the development and use of intelligence and data, the adoption of backcasting and futures methods, the promotion of city-wide and local community engagement processes, and the use of social science to map, understand and analyse the inter-relationships between sectors and processes through systems work.

13.13 The task of developing this shift in approach at a time when strategic planning is unpopular politically should not be underestimated. It will require the support and leadership at the highest levels of devolved government to stand any chance of succeeding.

13.14 More detailed work will be needed to understand the drivers of change affecting cities such as Newcastle upon Tyne, as well as ensuring that commitment across institutions and organisations remain to create a platform for long-term futures thinking. The academics of Newcastle City Futures 2065 project are willing to continue to facilitate engagement processes and assist in generating understanding within government, local authorities, other parts of the public sector, business and communities.

13.15 The following themes have been identified as potential future work:

- Visualisation of long-term scenarios specific to Newcastle that combine expertise in computing, mapping, spatial analysis, urban planning.
- Support for new digital platforms that allow the exchange of data across different sectors and organisations within the universities and cities, and the establishment of a common city-specific resource database for use by different actors.
- Identification of the assets of cities, that encompasses not only economic potential but also addresses social, environmental and resource assets and how these may change in the future.
- Demonstration projects within the city that seek to take a cross-sectoral approach to ameliorate problems or create new opportunities, for example:

1) relationships between an ageing society, housing needs, and the use of digital technology;

2) relationships between transport and highway design, digital technology and public health benefits;

3) relationships between enhancing local democracy and engagement, visualisation of the urban realm, and cultural and creative arts to generate public interest.

4) relationships between science and engineering and collaborative democracy, particularly around themes such as energy consumption, and health.

- There is also a need to capitalise on opportunities to bid for further funding for specific projects that have benefit to the city, and to promote the use of new methods that can be used by both universities and cities.

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PROJECT TEAM, LEAD EXPERT GROUP AND CITY FUTURES DEVELOPMENT GROUP MEMBERSHIP

Project Team Newcastle City Futures 2065

Professor Mark Tewdwr-Jones, Newcastle University Institute of Social Renewal/School of Architecture, Planning and Landscape, Newcastle University
Professor John Goddard OBE, Newcastle University Institute of Social Renewal/Centre for Urban and Regional Development Studies, Newcastle University
Dr Paul Cowie, Newcastle University Institute of Social Renewal/School of Architecture, Planning and Landscape, Newcastle University

Project Team Newcastle City Futures exhibition

Professor Mark Tewdwr-Jones, School of Architecture, Planning and Landscape, Newcastle University; Director.
Anne Fry, School of Architecture, Planning and Landscape, Newcastle University; Project Manager.
Dr Emma Coffield, Newcastle University; Curator.
Dhruv Sookhoo, School of Architecture, Planning and Landscape, Newcastle University; Design Advisor.
David Mitchell, Home Group; Design Advisor.

Volunteers at Newcastle City Futures exhibition

Emma Barral
Iván Diaz Burlinson
James Dyson
Carolyn Gibbeson
Jenny Greveson
Gabriel Niculcea
Rorie Parsons
Sam Smith

Lead Expert Group

Professor John Fitzgerald, School of Computing Science, Newcastle University
Professor Stephanie Glendinning, School of Civil Engineering and Geosciences, Newcastle University
Andrew Lewis, Newcastle City Council
Professor Louise Robinson, Institute for Ageing, Newcastle University
Professor Keith Shaw, Department of Social Sciences and Languages, Northumbria University
Professor Mark Shucksmith OBE, Newcastle Institute of Social Renewal, Newcastle University
Fiona Standfield, Science City Board

City Futures Development Group

Graham Armitage, Newcastle Institute of Ageing, Newcastle University
Lynne Davies, Newcastle City Council
Professor Richard Davies, Pro Vice Chancellor, Engagement, Newcastle University
Professor Stephanie Glendinning, School of Civil Engineering and Geosciences, Newcastle University
Professor John Goddard OBE, Newcastle Institute for Social Renewal, Newcastle University
Rob Hamilton, Newcastle City Council
Dr Colin Herron, Zero Carbon Futures
Andrew Lewis, Newcastle City Council
Hans Möller, North East Local Enterprise Partnership
Professor Louise Robinson, Institute for Ageing, Newcastle University
Professor Roy Sandbach, North East Local Enterprise Partnership
Professor Keith Shaw, Department of Social Sciences and Languages, Northumbria University
Professor Mark Shucksmith OBE, Newcastle Institute of Social Renewal, Newcastle University
Fiona Standfield, Science City Board
Professor Phil Taylor, Newcastle Institute of Sustainability, Newcastle University
Professor Mark Tewdwr-Jones, School of Architecture, Planning and Landscape, Newcastle University
Tom Warburton, Newcastle City Council
Lucy Winskell OBE, Pro Vice Chancellor, Engagement, Northumbria University

PARTNERS OF THE NEWCASTLE CITY FUTURES EXHIBITION

First tier:

Newcastle University School of Architecture Planning and Landscape
Newcastle University Institute of Social Renewal
Amber Film and Photography Collective
Archive for Change
Baltic Centre for Contemporary Art
Byker Lives
Farrells
GroundStudio
Home Group
Newcastle City Council
Newcastle International Airport
Newcastle Libraries
Newcastle Science City
Nexus
Royal Institution of British Architects
Royal Town Planning Institute
Ryder Architecture
Tyne and Wear Archives and Museums

Second tier:

Clouston Group
Newcastle Age Friendly City
Newcastle City of Sanctuary
Newcastle Cycle Campaign
Newcastle University Centre for Urban and Regional Development Studies
Planning Aid England
Workers Educational Association

Speakers:

Chris Anderson, Planning Aid England
Lowri Bond, Northern Architecture
Adam Carruthers, Fulcrum Arts and Research
Professor Tony Champion, Newcastle University Centre for Urban and Regional Development Studies
Lindsay Cross, West End Refugee Service
Councillor Nick Forbes, Newcastle City Council
Michael Freeman, artist
Professor John Goddard OBE, Newcastle University Centre for Urban and Regional Development Studies
Professor John Gold, Oxford Brookes University
Professor Sir Peter Hall, University College London
Dan Hill, Catapult Future Cities
Raymond Johnstone, Nexus
Katja Leyendecker, Newcastle City Campaign
Graeme Mason, Newcastle International Airport
James Newrick, filmmaker
Professor Andy Pike Newcastle University Centre for Urban and Regional Development Studies

Dr Ranald Richardson Newcastle University Centre for Urban and Regional Development Studies
Graeme Rigby, Amber Film and Photography Collective
Peter Sagar, A Living Tradition
Councillor Ann Schofield, Newcastle City Council
Lord Shipley OBE
Professor Mark Shucksmith OBE, Newcastle University Institute of Social Renewal
Sarah Smart, Newcastle City of Sanctuary
Professor John Tomaney, University College London
Simon Underwood, International Newcastle
Helen White, Tyne and Wear Archives and Museums
Michelle Wood, artist
Dr Sophie Yarker, Newcastle University Centre for Urban and Regional Development Studies

PUBLIC FEEDBACK FROM NEWCASTLE CITY FUTURES EXHIBITION

Very interesting exhibition

Wonderful – I learnt a lot

A marvellous achievement – much to be proud of in this great city

Exciting, too much to see in one visit!

Excellent exhibition – a lot of hard work in preparation. Hope it gets people discussing future

Fascinating exhibition, well displayed

Brilliant. I learnt a lot too

Puts today's developments and achievements in perspective. Excellent.

Congratulations

Very interesting – thanks so much for the opportunity to see it

Very good, great to see the past and future

Very interesting

Fantastic

Came across this fabulous exhibition randomly and thought it was interesting, thought provoking and well put together. Thank you for a memorable afternoon

Very good and proud of Newcastle

Fascinating to compare then and now and to reminisce and look forward

Real good show

Super smashing great – especially the Killy plaque!

Fascinating. Films are especially fantastic

Great exhibition on our amazing Newcastle

Great to see what is happening in the city. The city has to move with the times

Loved seeing the Tyne Bridge

Really enjoyed seeing this exhibition – great for all!

Helpful exhibition

Fantastico

We want more excellent exhibition with loads of interesting stuff. Would love to see a part two with even more old city/Newcastle area pics and new designs. Well done in particular to the curator

Excellent videos, living local voices, mainly of what has been lost. Disappointing that v. little positive shown of rehousing working class communities. Suppose that's because the people themselves weren't allowed a strong voice by powers that be

Archive for Change material brilliant – history repeating itself, communities destroyed by planners unable to appreciate a house is more than bricks. Planners should have to live in what they design. Resources and money wasted. Working class people's views ignored

Wonderful collaboration. Collection of perfectly solid pieces and the photographs circa 1990s were extremely interesting

Fascinating! Could listen to those stories all day. Thank you for a glimpse into the past

Great to see all these projects happening

Very interesting

Wonderful exhibition, fascinating

Fascinating exhibition

Very interesting looking at the past

Amazed to discover metro opened as recently as 1980. Excellent video and exhibition.

Fascinating exhibition – hope it survives in one form or another

Very interesting to revisit the past. Very well organised

Very interesting about the city, thank you

Loved exhibition, the old and the new

Bringing history to life –great!!

This exhibition made many useful points but more (not all cf. Byker Wall) of the buildings of 1960s to 21st century could be built in a 100 cities. There has been a disastrous lack of individualism in the architecture of the last half century. Congrats on a myth buster leaflet

Excellent use of the space, this should host exhibitions all year round! 'Crushing Strength' was a personal highlight. I'd also liked the Ouseburn Viaduct model in my livingroom, but it would not fit.

Enjoyable exhibition, interesting concept. Really helpful volunteer.

I have attended several evening events and the exhibition. The festival to celebrate 70 years of planning in the city has been exceptional. Well done and best wishes for the future.

PARTICIPANTS AT THE STAKEHOLDER WORKSHOPS

Newcastle Foresight Societal Challenge Workshop December 2013

Mark I'Anson, Newcastle University
Richard Dawson, Newcastle University
Kit England, Newcastle City Council
Martin Gollan, NCVS
John Goddard, Newcastle University
Sue Houston, BIS
Lucy Jowett, Climate North East
Adam Lopardo, Community Foundation
Mark Shucksmith, Newcastle University
Phil Taylor, Newcastle University

Newcastle Foresight Transport and Growth Workshop December 2013

Paulus Aditjandra, Newcastle University
Margaret Bell, Newcastle University
Sandra Bell, University of Durham
Graham Grant, Newcastle City Council
Simon Hanson, NE Small Business Federation
Graeme Henderson, IPPR North
Colin Herron, Zero Carbon Futures
Ray King, UTMC
Richard Kotter, Northumbria University
Graeme Mason, Newcastle Airport
Helen Mathews, Nexus
Adrian Morris, University of Sunderland
Andy Pike, Newcastle University
Vince Taylor, Sunderland City Council
David Toll, Institute of Civil Engineers
Geoff Vigar, Newcastle University

Newcastle Foresight Future City Dinner December 2013

Alan Clarke, ex One North East
John Goddard, Newcastle University
Sheila Johnston, Gateshead Council
Andrew Lewis, Newcastle City Council
Andy Pike, Newcastle University
Ian Postlethwaite, Northumbria University
Mark Shucksmith, Newcastle University
Adrian Smart, Nissan
Fiona Standfield, Newcastle Science City
Phil Taylor, Newcastle University
Mark Tewdwr-Jones, Newcastle University
Ed Twiddy, North East Local Enterprise Partnership
Sir Mark Walport, Government Office for Science
Karen Wood, North East Social Enterprise Partnership
Des Young, Siemens
Sally Young, Newcastle Council for Voluntary Service

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